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AUG 17 1946

# AMERICAN NURSERYMAN

*The Nurseryman's Forte: To Make America More Beautiful and Fruitful*

AUGUST 15, 1946



*Lonicera Henryi*

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# AMERICAN NURSERYMAN

[Registered U. S. Patent Office]

*The Nurseryman's Forte: To Make America More Beautiful and Fruitful*

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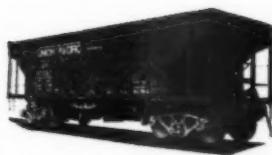
**CLOSING DATE**—Present printing conditions require that more time be given for putting current issues of the American Nurseryman through the press. So if you send material for either the advertising or the news columns of the **September 1** issue, please mail in time to reach this office by **August 20**.



(3) The Covered Hopper Car



(2) The Tank Car



(1) The Hopper Car



(4) The Livestock Car



(5) The Refrigerator (P.F.E.) Car



(6) The Box Car



(7) The Gondola



(8) The Flatcar



(9) The Automobile Car



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# AMERICAN NURSERYMAN

F. R. KILNER, Editor

## Editorial

### A. A. N. CONVENTION CITIES.

Members of the American Association of Nurserymen can look forward to four outstanding conventions in the next four years, to judge from invitations presented for its meeting place at the recent business session at Miami Beach.

Boston, Mass., was selected as the 1947 meeting place, on the invitation of various New England members. The event will be held during the week of July 21. It has been seventeen years since the A. A. N. met at Boston. The strength of the membership and the horticultural attractions in the area make certain a program that will draw a large, probably a record, attendance.

Since Wisconsin will celebrate its one hundredth anniversary as a state in 1948, the nurserymen of that state have presented, for three successive years, an invitation to hold the convention at Milwaukee that year. The A. A. N. was entertained there in 1916.

San Francisco has been looking forward to holding the convention for some time, and 1949 seems the appropriate year, as that is the centennial of California. The increased strength of the membership in that state supports the warmth of the invitation. A. A. N. conventions on the west coast have invariably been history-making events.

Chicago seems the choice for 1950, as that year the association will celebrate its seventy-fifth anniversary. The association was organized at Chicago and has met there more often than in any other city.

Such a convention schedule promises four outstanding events ahead for A. A. N. members.

### WHO'S WHAT.

Definitions of a nurseryman are attempted every now and then, with variations to suit the occasion. As the commercial horticultural field embraces a large number of individuals and specialization becomes more the practice, season by season, the definition of the nursery branch of the business is more important, though it is easily subdivided in various groups.

At its annual convention last month, the American Association of Nurserymen amended its bylaws to

## The Mirror of the Trade

define the nursery business as follows:

"The term 'nursery business' as used in the bylaws refers to the production and/or distribution of plant materials, including trees, shrubs, vines and other plants having a persistent woody stem or stems, and all herbaceous annuals, biennials, perennials, generally used for outdoor planting. It includes such business activities as the planting and servicing of landscaped areas. It excludes the production of such plant materials as bulbs and corms."

### SEED SALES AS INDICATOR.

The prospect and character of current gardening interest were indicated by the report of the activities of the National Garden Bureau rendered at the recent convention of the American Seed Trade Association. The National Garden Bureau is the publicity arm of the seed industry.

According to the report of Manager J. H. Burdett, the volume of packet seed sales in the United States, which during the war had increased to several times its prewar volume, showed a small decline in 1946, the first year following victory. He estimated that sales of vegetable seed packets were down twenty-five per cent, while sales of flower seeds either held their own or gained, so that the average decline in total volume from the peak year, 1945, was between ten and fifteen per cent. Thus this year's packet seed sales were next to the highest year yet recorded.

Of course, the enormous stimulation in seed buying by amateurs in the preceding three years was directly due to the war and the critical food situation. It was inevitable that the end of war should bring with it some reaction. High-pressure buying, especially of vegetable seeds, was definitely ended in the spring of this year, and the seed business was rapidly returning to normal. Not only did orders show a reduction in vegetable seeds, as compared with ornamentals, but the pace of business was slowed, with buyers taking more time to order, no longer fearful of scarcities and delays.

What seems important is that besides reaching an extremely high level of dollar sales as a result of the war, the seedsmen doubled the number of their customers. At the end of the first year of peace, they feel they have held these customers.

Since seed production can be increased far more rapidly than that of nursery stock, there is every evidence that ample supplies of flower seeds are and will be available for the public, though some items in vegetable seeds, requiring two years to maturity, may be short for another season. Hence the publicity activities of the seedsmen are maintained from year to year. The following figures from the financial statement of the bureau may be interesting.

Contributions to the garden bureau fund collected the past year totaled \$20,493, as compared with \$21,597 in 1945. Sales of posters and other receipts swelled the total income to \$27,985, as compared to \$28,717 the preceding year.

Expenditures were \$23,138, compared with \$23,056 the preceding year, and the balance on hand at the close of the fiscal period was \$35,282 compared with a balance of \$30,435 in 1945.

The chief work of the National Garden Bureau is done through the distribution of clipping sheets to newspapers. Other services are radio talks, moving pictures, colored slides and special articles for larger newspapers.

### FOREST SERVICE PROGRAM.

Anticipating a greatly increased need of domestic lumber production in the next decade, R. E. March, assistant chief, recently outlined a program of the United States Forest Service for the years ahead, under three headings, public aids and services to private owners, public regulation, and expansion and development of the national forests.

Many of the items of public aids and services to private owners are to be commended, such as the expansion of the farm forestry program, increasing cooperative fire protection funds, encouraging legislation for protection against pests, improvement of forest taxation and expansion of the program of benefit payments for forest conservation practices.

One item, besides the foregoing, is the acceleration of planting trees on private lands by increasing federal contributions to state nurseries and making planting stock available at cost to all forest land owners. Any large program in that direction will bear watching, because in that connection the competition of government with commercial nurseries is likely to make itself apparent again.

# We Had No Labor—What Then?

By V. C. Miles

During the past several years, the Soil Conservation Service nursery at Howard, Pa., like most nurseries everywhere, has been faced with the need to maintain production with insufficient labor. Before the war, when labor was plentiful, all the nursery manager needed was a supply of rakes and shovels, with strong backs to use them. Then came the war. The same number of beds had to be made; the rakes and shovels were available, but there were all too few strong backs. Confronted with this situation, it was apparent that other methods had to be devised to do the job.

The nursery personnel, particularly Nursery Mechanic H. M. West and General Mechanic J. M. Shultz, put their heads together and devised several machines and techniques which literally as well as figuratively kept the nursery from going out of business. Now that the war is over, our "inventions" and improvements are just as useful as they ever were. They are described in this article, with the idea that other nurseries might use them to advantage.

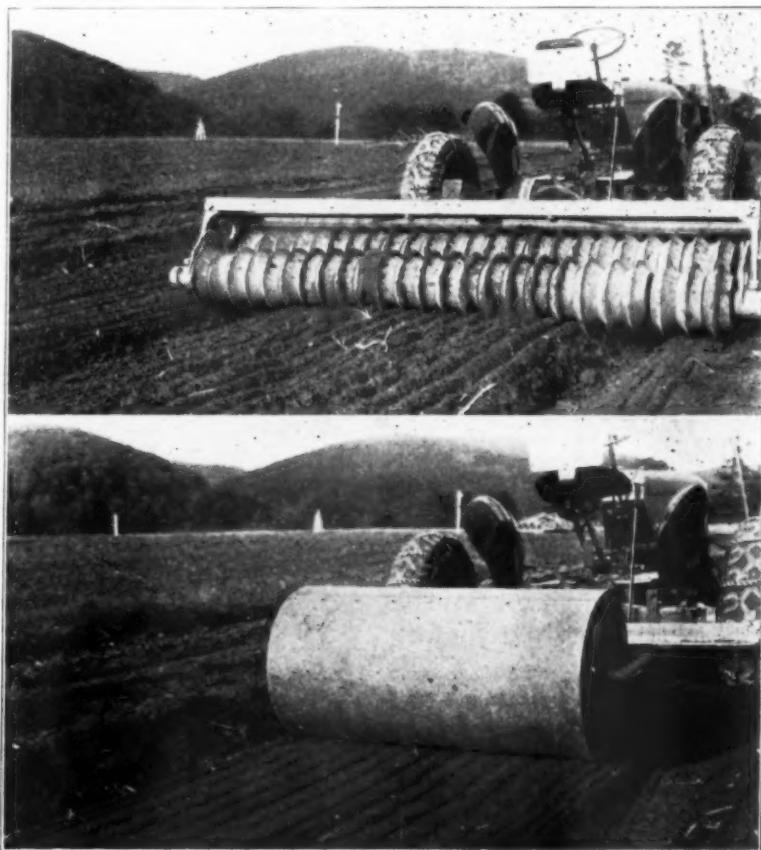
The first invention was a bed former, truly a simple machine, but precise in its work. The basis of the bed former was a push-type corn worker, powered by a high clearance type tractor. The cultivators of the corn worker were removed. In their place, two pieces of grader blade were attached to form an inverted V which could be raised or lowered by means of the same levers which formerly raised the cultivators. The blades could be adjusted for width as well as height, so that a bed of any size up to forty-eight inches could be made. As the former threw up the bed, a piece of angle iron, bolted to the rear of the tractor, leveled the soil. The position of the iron helped to make the bed wide or narrow, high or low. Finally, a small spike-tooth harrow was attached to the rear of the tractor, its purpose being to break up any lumps and help straighten out the bed. The resulting bed equipment is compact, fast, easy to handle, maneuverable and stout. It can make a high bed or a low one, narrow or wide, and turn out three and one-half miles of 48-inch bed in eight working hours—just the machine and one operator. All of this did not take place in one season; many bugs had

to be removed and corrected. But by the end of the second planting season, the bed former was doing the required job.

To give us a firmer seedbed on some of our heavier soils, we made use of a cultipactor to break the lumps and, finally, a roller to smooth and polish the bed. The roller was made from a half section of a land roller, filled with a bushel of sand to give it the required weight. All rolling previous to this time had been done with a wooden roller pushed by two men, but now we could not afford to use labor for this job. A tractor on rubber was transferred to the nursery, but it was not designed to straddle the beds. We needed another tractor to pull the cultipactor and work the roller; so our mechanic added some pieces here, turned wheels inside out to widen the tread and made the tractor straddle the beds. A hitch was made for the roller

and we were set for the finished job. The beds were formed, cultipacted and rolled. Then we were ready to seed.

After the seeds were applied, they were pushed into the ground by the above-mentioned roller and tractor, which made a total of two rollings per bed. Covering seeds has been just about as laborious as throwing up seedbeds. Heretofore, the seeds were covered with a sandy loam soil which was screened onto the beds. Each screen was operated by two men; another man kept the screen filled with material while the operators shook the screen back and forth. When one figures seedbeds in terms of miles it can readily be seen that this operation took manpower and plenty of it, but now we did not have the manpower. We could make beds with machines, but we needed something to cover the seeds or we were licked. West and Shultz got together again,



Top—Soil pulverizer attached to tractor showing effect of pulverizer on newly thrown up bed.

Bottom—Roller attached to tractor showing effect of roller on bed that has been pulverized; bed now ready for seeding.

and a spreader was developed. The first spreader was a sawduster, for we had decided to cover our beds with sawdust in place of the usual sand application. The material was easy to be had and took fewer men to get it and handle it. The spreading apparatus was merely a dump truck. However, the truck had to be adjusted to straddle the beds; so we took a short wheel base 2½-ton dump, turned one front wheel inside out, removed inner wheels of rear duals, added a piece here and there and we had it—twenty minutes to convert either way. The dump was loaded with sawdust and put astraddle the bed to be covered; then the dump bed was raised to the proper height the tail gate adjusted (by trial and error) and the truck put in motion. Two men in the truck bed kept the dust flowing; one man on the tail gate kept the proper adjustment, and the thing worked.

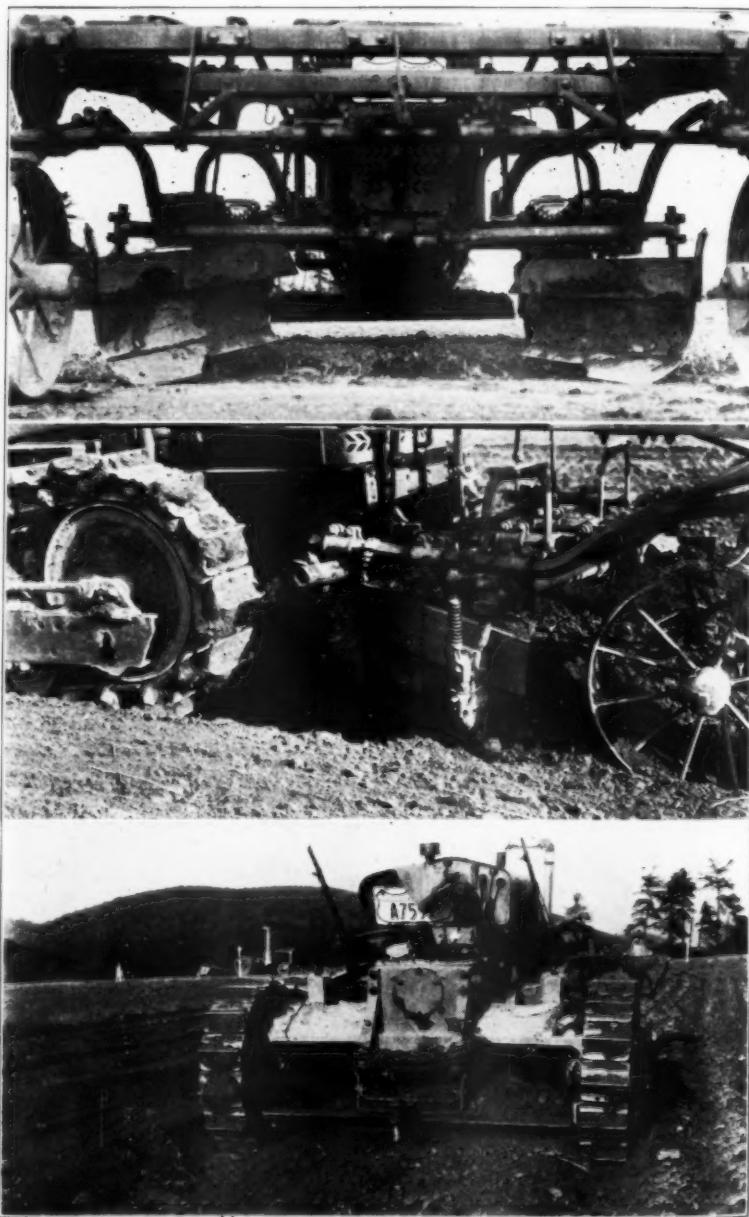
However, we still wished to get a finer job of covering the seeds, whether it be sand or sawdust. A spreading apparatus was constructed so that it could be hooked onto the end of the truck bed. The apparatus consisted of a trough in which was located an agitator to keep the material flowing. As the material was dropped out of the trough by the agitator, it fell onto a fast-revolving screen. The action of the screen placed the material on the bed evenly and at the required depth and width. A gate on the trough regulated the flow of the material. The agitator and screen were run by V belts working on the rims of the two inner tireless dual wheels.

By this time labor was really getting tough; in fact, we did not have enough to run the spreader, plus doing all the other jobs in the seeding operation, and feel we would get our job finished in a reasonable length of time. Therefore, we questioned ourselves, "Why cover our seeds with any material?" The normal spring seeding practice at this nursery has been to make beds, seed them, cover the seeds with material, place shade racks over the beds, and cover the shade racks with burlap or insert lath in the open slots of the racks. When germination takes place, we remove the burlap and lath and raise the racks above the beds. Permanent helpers were few, but we did find out that we could get local high school boys to work after school and into the evening as long as it was light enough to work. Boys and machines do not work too well together, but they could place shade racks and cover with burlap or lath. In order to get the job done, we had to seed

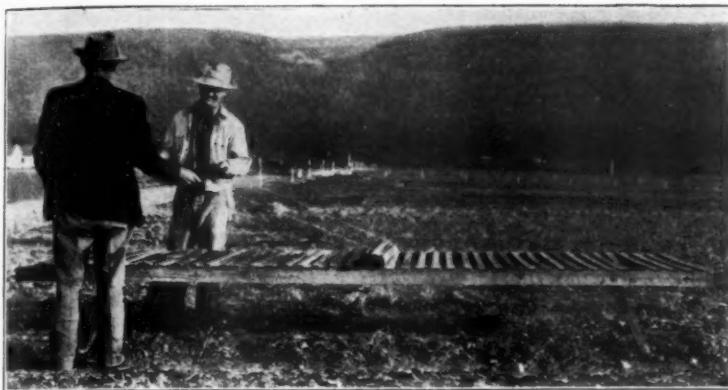
fast and do plenty of it in order to keep ahead of the boys; therefore, one operation had to be cut out. It was decided to eliminate the spreading operation entirely.

With our few permanent helpers and machines, we made beds, seeded and rolled them in the daytime, and then covered them with racks and lath in the evening. Since our supply of burlap was limited and our source of supply was zero, it was necessary for us to use lath to fill in the open places in the racks. Placing lath and removing the same lath can be a time-taking operation. We felt

that if we could cut the time for the operation by forty per cent, we would have something. West found that "something," and all it consisted of was string. Two strands of string, each running the full length of the beds, were placed on top of and about six inches in from each side of the rack before the laths were inserted. When the time arrives to remove the lath, two men working as a team start at the same end of the bed; each takes hold of a string and then starts walking down the path on each side of the bed. As they walk, the strings pull the lath out and roll the



Top—Front view of bed former, showing blades that throw up bed.  
 Middle—Side view of bed former, showing blades in action.  
 Bottom—Front view of bed former, showing blades that throw up bed.



View of shade rack on folding legs with lath inserted to give complete shade. Removal of inserted lath being made with strings.

sticks along in a loose bundle. When the desired size bundle is gathered, the strings are pulled out from under the bundle and another bundle is started. In the meantime a man follows along and ties the bundles. Simple, is it not? But it saves forty per cent.

Once the lath is removed, the shade racks must be elevated above the bed. Heretofore, the racks had been supported by saddles driven into the ground at each end of the rack. The operation, when calculated in terms of miles of seedbed and thousands of saddles driven, can consume many man-hours. Mr. Gallagher, nursery foreman, got the idea of putting folding legs on the racks. Now all that needs to be done is to have a team of two men work on one bed, a man on each side, and as they come to a rack, raise the end, lower the legs, move on to the other end, repeat the same operation and so on down the line. Compare these two men raising the rack and lowering the legs to the same two men driving saddles and then placing the racks on them. This was also an excellent idea for another reason; the job of adding the legs was done in the winter, and the legs were made from bed stakes, which were no longer necessary, since we now had a machine to do the bed making and it did not need stakes to outline the beds.

The adaptation of our trucks to straddle the beds has saved many man-hours. Normally, anything going on the beds, be it racks, seed covering material, straw and so forth, had to be carried in from the road. This meant several handlings, plus the carrying in, but now we load and go directly to the spot to be covered and place our material.

One of our tractors is equipped with a mowing attachment which works on a cable lift and can be raised or lowered with a touch of the finger to any desired angle. The en-

tire blade can be raised and held horizontally in a range up to thirteen inches. This factor has enabled man-hours to be saved in the mowing of stock which had to be surveyed, thus enabling the material to be removed faster and easier. We have also been able to hold coniferous stock to a given height by clipping it at the desired height at the proper time in the year. At one time we did

this operation by hand, and we had a long, long hedge to clip.

Placing irrigation lines has often been a long and slow business. Driving the posts has been hard and dangerous, for heretofore all posts have been driven by sledge. A simple device has speeded up this operation and taken the safety factor out of the picture. All this device consists of is a larger-size piece of pipe with a chunk of axle welded inside it. This apparatus acts as a sleeve and pounder, and with a crew of three men (one to sight, one to steady the post and one to pound) spelling each other off, posts can be driven easily, safely and rapidly.

In the shipping end our big time-saver has been a foot-power bunch tier. This machine has paid for itself many times. Tying bundles of trees can take many man-hours. This machine saves those man-hours for pulling stock and other operations.

What does all this add up to? From a seeding operation standpoint, we can start at 8 a. m. on ground that has been plowed, disked and harrowed, with twelve men (ten boys, two men), one tractor operator, two



Top—View of tractor. (This equipment pulls pulverizer and roller in bed-making operation.) Note rear wheels turned inside out, tires and rims also turned inside out, thus giving a clearance of five feet eight inches center to center. Front axle lengthened by addition of 24-inch section to make same clearance as rear wheels.

Bottom—View of tractor straddling bed, with mowing bar in position for cutting (height of cut determines actual position of blade).

tractors, bed former and so forth, and average one mile of seedbed made, seeded, rolled and covered with shade racks, and at 5 p. m. be all cleaned up. Our other techniques and ideas have also paid off on man-hours saved, so that our entire operation could be continued and maintained.

We had no labor—what then? We got together, not one but all of us, and solved our problems as they came up. Yes, we must have, for we are still in business and it is a good business.

#### GREENHOUSE FIREMAN IS AGRICULTURAL LABOR.

The greenhouse fireman employed by a Connecticut florist was recently held by the United States District court of that state to be exempt from the coverage of the fair labor standards act because he was engaged in agricultural labor.

John Damutz, Guilford, Conn., recently brought action against the florists' firm, William Pinchbeck, Inc., Guilford, for unpaid overtime compensation alleged to be due him under the fair labor standards act of 1938 (act of June 25, 1938, C. 676; 52 Stat. 1060; 29 U. S. C. A. 201 ff.). The plaintiff, who was employed as a fireman in the commercial greenhouse, was concededly paid on a straight-time basis and worked hours in excess of the maxima established by the fair labor standards act.

The defendant, relying upon the agricultural exemptions of the act, claimed that the plaintiff was either an agricultural employee under section 13 (a) (6) or an employee engaged in processing agricultural commodities within the area of production under 13 (a) (10) of the act.

The United States District Court of Connecticut decided that production by the defendant of cut flowers in its greenhouses was production in horticulture within the meaning of the fair labor standards act. The plaintiff, in his duties as a fireman, the court said, was engaged in the production of cut flowers for marketing in (interstate) commerce and in such production was an agricultural employee within the meaning of the fair labor standards act. As an agricultural employee, therefore, he was exempt from the coverage of the fair labor standards act.

In a memorandum of decision, Judge J. Joseph Smith said: "It would be desirable to extend the coverage of the act to include those who work in such occupations as the plaintiff's, as well as to include all those employed in commercial nurseries or

greenhouses, since the conditions of their employment, particularly if they are located near industrial areas, are more nearly those of workers in the factories than those of workers on the ordinary farm. The Congress, however, has not included them, and it is not for the court to amend the act, however desirable the amendment may seem."

#### W. B. CLARKE.

W. B. Clarke, president of W. B. Clarke & Co., San Jose, Cal., who celebrates his seventieth birthday this August, has had the nursery business in his blood since his boyhood days at Rochester, N. Y., when he stayed out of school two or three weeks every fall and spring to work



W. B. Clarke.

in the nursery packing yards. In those days Rochester led the country as a nursery shipping center. Throughout his high school career Mr. Clarke worked as a shipping clerk for Brown Brothers Co. and after graduation remained with that firm for three years. In 1896 he enrolled at the University of Rochester, working part time in the offices of the Allen Nursery Co. In 1899, when this firm decided to open a branch office at Chicago, Mr. Clarke quit school to become manager there.

In 1901 he started in business for himself at Kalamazoo, Mich., under the name of American Nursery Co. This venture was successful for four years, until a killing winter freeze destroyed most of the growing stock. It was then that he decided to go to California.

Upon reaching the west coast Mr. Clarke found employment with the California Nursery Co., Niles, where

he remained for eleven years. For the last four years he was sales manager of the ornamental department. It was during this time that he organized and published the well known semicentennial edition of the company's illustrated catalog. Over a period of four years Mr. Clarke had accumulated photographs, taken by himself, covering a great range of plants and flowers, which illustrated the book. Issued in 1915, it was designed to serve as a reference book of ornamental stock used in California.

In 1916 Mr. Clarke became sales manager for the Cottage Garden Nurseries, Eureka. This company, established by the late Charles Willis Ward, went into receivership, but Mr. Clarke continued to serve in the same capacity until 1921, when he established his present business as horticultural broker. At that time he also formed a partnership and purchased the San Jose branch of the Ward enterprise. It has been operated since then as the Clarke Nursery Co. The brokerage business is entirely separate, but handles all sales for the Clarke Nursery Co.

Mr. Clarke's son, James, joined him as a partner in July, 1925, and the brokerage business has since been known as W. B. Clarke & Co.

Roses and the flowering fruit trees are Mr. Clarke's chief hobbies. His collection of the latter is considered one of the largest, if not the largest, on the west coast and one of the largest in any commercial establishment in the country.

At one time Mr. Clarke served as president of the California Association of Nurserymen. He is a member of that organization, American Association of Nurserymen, American Rose Society, Commercial Club of San Jose and Elks.

**SOUTHERN BULB FARMS, INC.**, recently purchased the property, greenhouses and nursery stock of the Perfection Nurseries, Inc., Foley, Ala. Lyle Cleveland will manage the new branch for the bulb farms.

**HAROLD E. HICKS**, who during the war served as an ensign in the navy, was recently discharged and is now back with the Cottage Gardens, Lansing, Mich., where he will hold the position of assistant manager. After graduation from Michigan State College, Mr. Hicks worked at the Cottage Gardens for two years and for a short time was employed in the drafting department of the Oldsmobile Co. before joining the navy.

# Good Labor Relations

By Charles S. Burr

C. M. Schwab said, "How to measure and relate output and wages on some fair basis has become an important function of management." I am amazed whenever I speak to men in other industries to hear what they know about their industry and how they can discuss their needs, their problems and their costs.

Many of us in the nursery business have taken an attitude of complacency and reticence. We find it is easier to say "It cannot be done" than to do it. I am happy to find, however, that we are beginning to consider some of the modern concepts of progressive management and to apply some of these principles.

One of the greatest problems facing our industry at the present time is the question of labor relations. We have all heard this term used, and no doubt we have established opinions on what it means. I am going to try to highlight the more fundamental principles involved in the definition of the term. The first and foremost fact to be considered is that all men desire recognition in the job they are doing. They want to feel that they are important to the task to be performed. Therefore, it behooves the management to hire and train foremen and supervisors who will satisfy this desire in the men under their supervision.

The next facts to be considered are the wage rate and potential earnings or "take-home pay" of the individual. We are going to be faced with the growing problem of meeting increasing wages in other industries. If we are to survive we will have to realize that we are no longer in the old dirt farmer stage, but developing into a large and intricate business. We have, in most cases, to draw our help from labor markets of a highly competitive nature. We can no longer depend upon the wives and families of our help to be ready and willing to work for a few months at a time, when these same people can go to manufacturing plants and get steady employment at high wage rates. It is only reasonable to expect that under these circumstances we are going to be faced with a price structure revision, which in my opinion, will be upward.

What is the answer to this prob-

lem? In my opinion it will be found in a sound, well installed and carefully managed incentive wage plan. I have come to this conclusion only after giving the whole subject considerable thought based upon experience in our own organization. What are the end results of a good incentive plan? (1) Increased take-home pay, (2) increased production and (3) lowered unit costs.

How are these three desirable objectives achieved? First, the take-



Charles S. Burr.

home pay becomes limited only by the individual operator's ability to perform the task. Here management holds a great responsibility to see that all the necessary supplies and materials to complete the operation are available. If this condition is met, the incentive influence takes effect and the result is automatically the second item mentioned, namely increased production.

The third item, or resultant, of a good incentive plan, lowered unit costs, is of a more technical nature and is achieved by the application of time study and methods study to determine just what the task is and how long it should take to complete it. This time value is then converted to a dollar value and is known as the rate for the particular operation. Since production is a correlated figure of time and volume and since we now have a dollar value for time, it is obvious that as volume increases, the relative dollar value decreases, resulting in reduced unit cost.

These are, in general, the objectives of a good incentive plan. It might be well at this point to describe briefly some of the better and more universally used plans.

Incentive wage plans fall into three major groups: (1) Piecework, (2) group bonus and (3) measured day-rate. Piecework, of course, is one of the most common of all incentive plans. It is based on individual effort and application to the task. It may be used only when there is no element of cooperation or interdependence between operators or operations. It is weak in that it makes no allowance for inspection and oftentimes proves costly by resulting in poor quality. It was originally designed for machine operations where the operator controlled only the time element.

The second category, the group bonus plan, depends upon cooperation between operators, because group production is the basis of payment. This plan has some advantages in that it makes provision for quality as well as quantity and stimulates a self-sustaining supervisory effect on the operators. If one operator fails in his task, the others will try to help him or have him removed from the group. Some of the disadvantages of this plan are that it is expensive to maintain and is limited in scope.

The third grouping, measured day rate, is the most practical all-around plan for the average firm. It is based on the standard hour production, or so many pieces per hour for so much per hour, as a bogey. When production exceeds bogey, a rate applies in the direct percentage of an hour. This plan will lend itself to individual performance and also group performance. It is relatively inexpensive to maintain and requires a minimum of supervision.

The whole subject of incentive wage payment is much too involved and lengthy to do it justice in so short a time. I have tried to stimulate the thinking of our group in order to promote an interest in finding a solution to these problems in our industry. We, as the management of the nursery industry, have many responsibilities to carry. In order to achieve a happy solution to the ever-growing problems of operating a business, we are going to have to concern ourselves with the progress made in other lines.

We cannot do as the ostrich does.  
[Continued on page 44.]

Address by Charles S. Burr, president of C. R. Burr & Co., Manchester, Conn., before the National Landscape Nurserymen's Association, at Miami Beach, Fla., July 15.

# Pruning Shade Trees in the Nursery

By H. M. Van Wormer

When a tree has been transplanted from the nursery, it is much like a boy who has become 21. He is now on his own. Many times trees are planted and forgotten after the first year. It is for this reason that I think all the help possible in preparing the tree for the future should be rendered in the nursery.

In these days of adverse conditions, it may seem perhaps a waste of time to spend much effort or time in the nursery row pruning trees. It is also difficult to find experienced men capable of pruning. Perhaps in the not too distant future normal conditions again may exist. Then we must prepare our stock to meet or excel competition.

No specific rules of pruning can be adopted. Not only should the trees have deadwood and excess limb growth removed, but they should be pruned for a particular purpose. Are they to be street trees, ornamental trees, trees for screening or otherwise?

In order to present the different methods of pruning that more or less apply to various trees, I am classifying them by groups.

Group I would be trees suitable for street, highway or subdivision purposes. In most cases they would be deciduous. They would have to have a fairly high trunk before branching, as well as one well established leader for upright growth. In order to produce this type of tree, all lower limbs should be cut close to the trunk and the elongated branches clipped back somewhat to allow the leader to develop freely. Pruning these trees for this particular group requires foresight. By lifting the limbs to establish higher limb development, the tree is stimulated in upward growth. Crowding limbs and more than one leader should be removed. In fact, trim out the inside of the tree until you have a good, clean framework of limbs suitable for growing and becoming a tree to fit your specific desire.

If your nursery has not been trimmed out for the past five years, a severe pruning the first year will have to be followed by a second the following year to cut off excess sucker

Paper on "Pruning Trees for Future Development," by H. M. Van Wormer, president of the Van Wormer Tree Service Co., Richmond, Va., presented before a meeting of the Virginia Nurserymen's Association.

growth. It will be a pleasant surprise to you when, after severe pruning, you find you can gain one to two years' growth in height and size.

Trees for this type of planting would be pine, red and scarlet oak, willow, red maple, sugar maple and elm.

Group II would consist of trees grown for ornamental and shade tree purposes. This type of tree is always to be considered of greater value to the tree owner for his particular enjoyment and pleasure, such as landscape effects, shade influence or sky outline. These trees would perhaps be of larger transplanting size, since the trend is for as large a tree to be planted as possible, consistent with good tree-moving standards, of course. At this time, good specimen trees are hard to find in the majority of nurseries.

One thought that also might be given in pruning is to trim two trees standing near each other to correspond in all appearance regarding height, limb spread, etc. A pair of trees will always bring a premium. They should be sold only in pairs. This group of trees would, in the majority of cases, have limbs reaching from ground level to shoulder height. Care in pruning must be given in thinning out excess limb growth inside, conserving the general contour of growth. All extra leaders should be removed and the tree made to look as handsome as possible. Premiums can be collected on extra-good stock which is about impossible to find at this time. The old saying, "quality instead of quantity," holds true in tree values. Trees in this group would include evergreens and deciduous trees.

Group III would consist mainly of specimen trees. They would include flowering cherry, copper beech, Chinese magnolia, white or pink magnolias and many of our stately evergreens. Pruning for future development of these trees will require two cuttings a year in some cases. You will say that it will not pay. But I am sure it will if you desire to grow this type of stock. Perfect specimens always command respect and high market values.

Acreage half or two-thirds filled with cull and crooked materials never can bring anything but lower prices. The immediate future with inflated values will offer many markets for ornamental and specimen stock.

Group IV is the bread-and-butter stock that has to be grown in every nursery along with the standard varieties. These trees are, as a whole, fast to grow and quick to die—Lombardy poplars, mimosas, willow, soft maples, etc., and a few evergreens. Often these trees never feel a pruning saw. Most of the soft-wooded trees, like willows and mimosas, should be cut back each year so that limb structure may be enlarged and thereby be less easily broken at the season of planting.

Group V would cover pruning trees in the transplanting period and after the first or second year. The first three years of any medium-size transplanted tree is easily considered the crisis of its life. It is at this time that sap stagnation takes place due to root capacity shortages, which in turn give wood borers an opportunity to attack. This is especially noticeable on oaks, dogwoods and sugar maples.

By pruning out all possible inside branches, you aid the roots in overcoming the off-balance ratio of leaves and roots. At all times, however, the general tree contour should be sustained. If possible, at this stage, all ends of branches should be clipped back one-fifth of their previous lengths. This should be done after the trees have been planted in their new location and with the consent of the new owner. He may argue that he buys a larger tree only to have it reduced two years in size at once. The reason for this act of cutting is to establish a closer ratio between roots and top. Lack of this balance is one of the reasons why trees produce so little new twig growth the first and second years after planting. It is much more essential to have an active root system with a smaller head of branches than to have a large head of branches and a small inactive root system.

During recent years many trees have been transplanted by the government on housing projects, airports and other public places. In many places, especially army camps, the trees were taken from the woods and transplanted, and the operation was completed in many instances during the growing period. Surprising as it may seem, the mortality rate was about twenty per cent, or about eight per cent over normal rates. One of the reasons for this low mortality was heavy topping and cutting of

[Concluded on page 46.]

# Selling Plantings From Sales Grounds

By Ray D. Hartman

All ideas and suggestions made here are from experience gained mostly in the Pacific coast area and particularly under California conditions, as it is realized that any attempt to cover the field of selling nursery stock plantings under various climatic conditions would be most difficult in this short article.

In presenting a paper of this nature it seems that a certain amount of outlining and detailed explanation is necessary for a more complete understanding of the problems of selling nursery stock plantings, and for eventually having a satisfied client, which, in the main, is our ultimate endeavor.

Several important concepts are essential at the outset in order that the initial contact, or approach, will not be stymied before you have secured the confidence of your prospective client. The word confidence is used because I feel it is extremely necessary to secure the trust of your client at the beginning. The manner in which you go about obtaining this confidence will spell the success or failure of your efforts.

The word client is used because we regard this term as quite different from that of the ordinary customer. A client is defined as one who employs the services of any professional man, and certainly the art of landscaping is regarded as a profession.

Selling landscape plantings is a separate department of the nursery business, a technical and specialized feature. The potential sales per customer are many times more than ordinary sales from the sales grounds, because this kind of customer is interested in creating an immediate or complete beautification of his grounds and home.

## Initial Contact.

How the initial contact is made is most important, whether it is by newspaper advertising, direct mail, recommendation or personal solicitation.

Newspaper advertising is one of the best media for keeping your name before the public, considering cost in proportion to value received. Use your home-town paper or papers, and possibly several other papers in adjacent cities or towns. Our experience is that the best results are from con-

Address by Ray D. Hartman, Leonard Coates Nurseries, Inc., San Jose, Cal., before the National Landscape Nurserymen's Association, at Miami Beach, Fla., July 15.

sistent use of a small or medium-size advertisement, briefly stating that you have a complete landscape department with trained personnel, capable of handling large or small landscape plantings.

Direct-mail advertising can be used to good advantage in some instances. It is often a good idea to write prospective clients to acquaint them with the fact that you have the facilities properly to landscape the grounds of their homes or factories. If your prospective client is interested he will probably look up your reputation and,

performing satisfactory work, for being dependable and, above all things, for keeping your promises. You will find that complaints answered immediately are most easily corrected.

Your client's confidence is not to be obtained from thin air. You cannot become endowed with it nor can you secure it by reading books. Such things as manner of approach; personality; knowledge of plant materials, soils, exposures and topography, and sincere personal interest will go a long way in obtaining the confidence of your clients.

## At the Sales Grounds.

Now as to ways and methods of actually selling the plantings. It is assumed that your client has made his initial call and that you have secured at least a certain amount of his confidence after presenting a rough sketch or scaled plan for his further consideration. It follows that the next step is for the client to visit your display and sales grounds. This visit is to be under the supervision of the original contact or salesman. Assuming that you have at least a few specimens of the varieties listed in the client's planting in your display gardens, some time could be profitably spent in explaining the habit, type and methods of growth of these varieties so that the ultimate effect can be visualized.

The nursery stock on the sales grounds should be segregated and arranged according to types, such as evergreens (coniferous and broad-leaved), deciduous (trees, shrubs, roses, fruit trees, etc.), annuals, perennials and bulbs in season. There should be a separate section for peat, loam, fertilizer and miscellaneous items, such as pickets, stepping-stones, bricks, sand, cement, pipe and lumber. All this systematized arrangement should certainly further impress your client that you are prepared to do a first-class job.

A well organized landscape organization should be equipped and prepared to install any walks, rockeries, patios, sprinkler systems, pools, barbecue pits or outside fireplaces which may be included in the plans. The salesman, after conferring with the architect, will point out to the client the ability of your organization to handle these matters.

The proper tools and power outfits are helping in doing a first-class

[Continued on page 49.]



Ray D. Hartman.

if he finds it satisfactory, will ask you to call and consider his problems.

Personal recommendation is one of the most effective means of making initial contact. There is nothing that gives a client more confidence in your firm than to have a friend or acquaintance, particularly one that you have served before, speak a good word for you. In many cases we find that when we do a planting job in a neighborhood we often gain several more jobs in the vicinity. It is difficult for the average layman to visualize a landscape planting beforehand, but he readily seems to appreciate good work and materials when he sees them.

Selling or soliciting from door to door is probably the least satisfactory method of obtaining new business, for it puts your firm on the defensive from the start. Generally speaking, this method should be avoided.

You must have a reputation for being reliable in your community, that is, a reputation for fair dealings, for

# Developing Sales and Display Grounds

## PART VI - DISPLAY ARRANGEMENTS

For the background in displaying plant materials and garden accessories, much use was made of permanent landscape arrangements on the sales grounds, in the designs submitted in the contest for sales and display grounds plans. This is as it should be, for customers should be able to expect to shop for garden materials in a landscaped atmosphere.

J. Edson Lowry, Indianapolis, Ind., put it thus: "The conscientious nursery in the future will recognize its obligation to the public for a competent educational program along the lines of good design and a proper use of the right plant material. For this reason the building and a large portion of the property are devoted to a pleasing display grounds where the public may see the proper use and groupings of various types of plant material, all of which is carried out with the modern theme in mind."

This background for the selling of garden materials often was carried out as suggested above, with sample

or show gardens on a portion of the property. The design of Julian Schmitz (Fig. 14, July 15 issue) shows this idea carried out with a great variety of plant material for the customer to see in use on the grounds. Here there are a country garden, a formal garden, a rose garden and a bulb garden. These are on different elevations, giving an opportunity to show the use of walls and steps. These four gardens represent those gardens most used by the customer and show the plants offered for sale being used in their proper capacity. A clever arrangement suggesting a way in which a foundation planting might be effectively displayed on the sales grounds is shown in a detail which accompanied Mr. Schmitz's general plan (Fig. 18).

Reference was made previously to the display of growing plant materials, arranged just off the office terrace, offered in the design of Stanley McIntosh (Fig. 13, July 15 issue). In it a variety of plants was grouped

together informally, but in organized beds in order to give form to the design.

### Selling from Outdoor Beds.

Although some of the designers thought that there should be no beds to sell from directly on the property, most of the planners saw the desirability of some arrangement for outdoor bins. In fact, in some of the plans a great proportion of the display grounds was taken up with such bins or beds (Fig. 2, June 1 issue; Figs. 12 and 15, July 15 issue). The purposes of these beds are to display plant material for sale and to keep B&B material and potted plants in good moist condition at all times. Of course, the convenience of selling from these beds is of prime importance.

The construction of such beds seems to take a rather definite pattern, ranging in width from four to six feet (with a few wider). Either

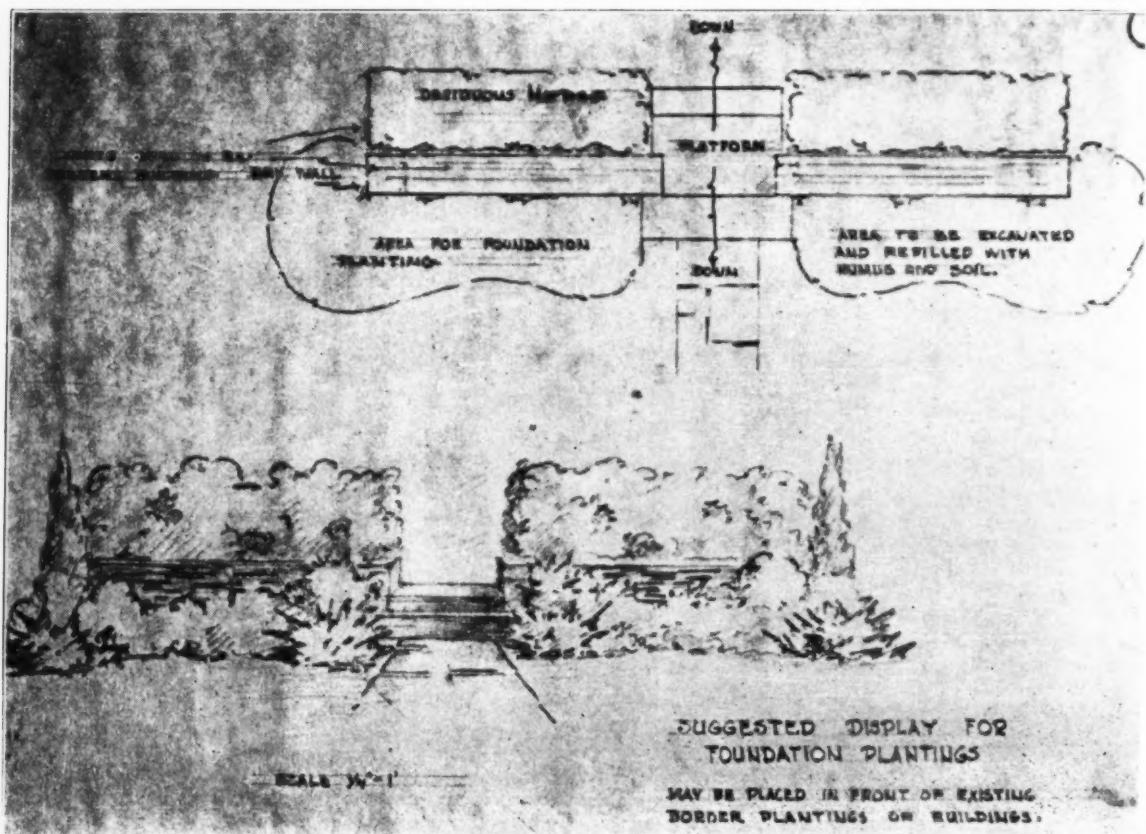


Figure 18. Here is a clever arrangement to suggest a foundation planting. The hedge and wall are to represent a building. The drawing is from the plan of Julian Schmitz, Watertown, Conn.

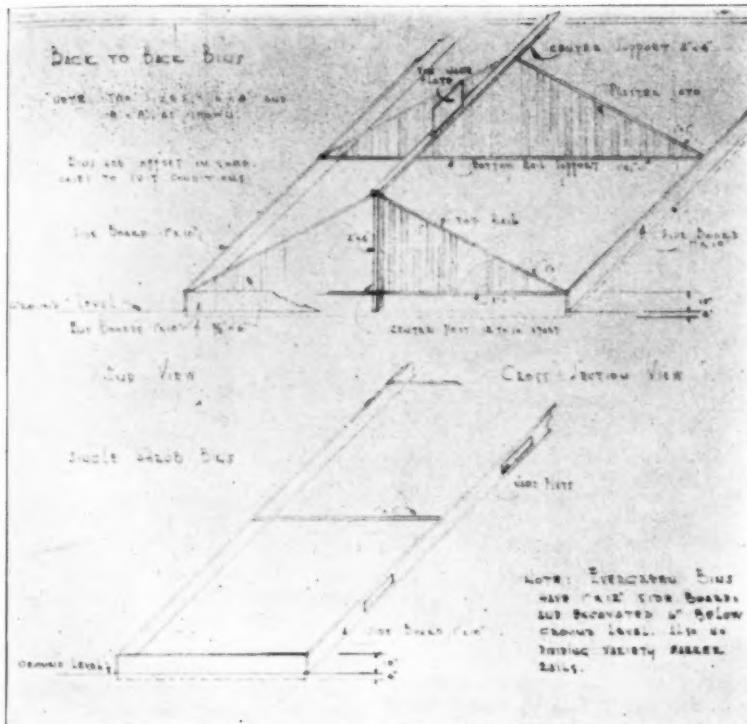


Figure 19. A detail for the construction of plant material bins. Note the tin name plates for each partition of the bins. The detail was part of the plans submitted by Milton B. Peasley, Highland Park, Mich. His plan won a mention in the contest.

peat moss, humus, loose soil or sawdust was used to a depth of ten to twenty-four inches, depending on the type of material to be planted in the beds.

A detail of the construction of such beds is shown here (Fig. 19). The details were taken from the plan by Milton B. Peasley, Highland Park, Mich. Note the use of lath for neat divisions in the beds. The sideboards of 1x10 inches would seem better made of heavier material, or even of concrete, as is suggested on several of the plans.

### Automatic Sprinkling System.

Another detail showing sales frames set level with the sod and a system for automatic sprinkling should give some ideas to those wishing to make the grounds more complete. This was designed by Mr. Schmitz, also (Fig. 20). Some exception might be taken to this scheme, for there is no evidence of curbing used in these beds, which would seem to be the accepted practice for making most beds for use on sales grounds.

Most designers made a distinction between sales bins or beds and the heeling-in areas. Some of the planners treated the heeling-in areas as semiservice portions of the grounds and seemed to think they should be

areas. A screen keeps the less attractive material hidden from view.

### Arboretum Idea Used.

Orville Emery, Waynesboro, Va., used an arboretum type of arrangement, with winding paths, about a portion of the property to display plant material in the larger sizes. This would give the customer some idea as to the mature nature of the plants being offered for sale in smaller sizes.

Attention should be drawn to the fact that too elaborate display grounds may become difficult to keep in good order at all times. If they are not kept in good trim, a simpler scheme should have been used, for it soon defeats the purpose of the display gardens to have them overgrown, weedy and generally unkempt.

### Combination Display.

Aubrey De Graw, Worthington, O., had this to say: "Most people really want to buy a picture made with plants rather than any one plant; so I have designed outdoor display bins like show windows, wherein the plants are semipermanent. Vines may be grown on the wall for years, some trees and shrubs may stay several seasons, while foreground flowers could be changed several times a season to keep a good show. The inner and outer angles of the wall give opportunity to present arrangements and combinations of plants as they would appear on the customer's property. We would price whole settings as a furniture dealer

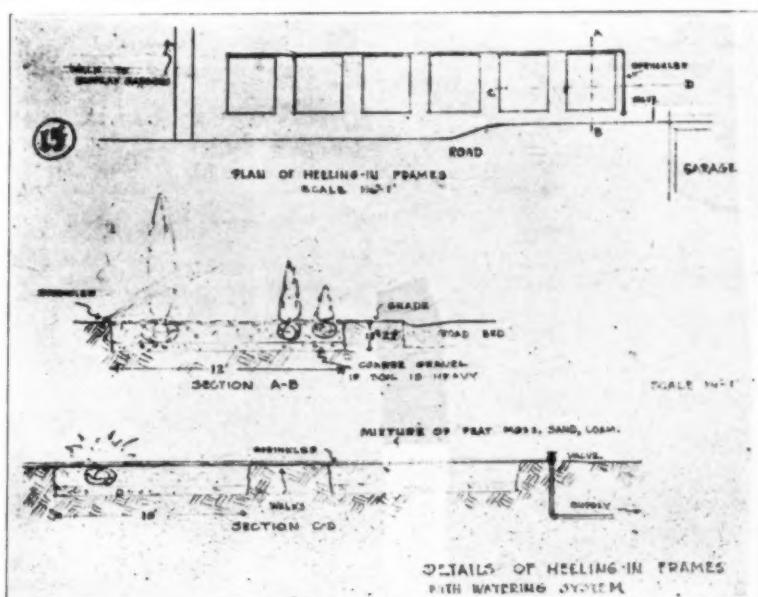


Figure 20. A detail showing ground level beds with sprinkler outlets. This is another detail from Mr. Schmitz's plans.

does a room of furniture. These show bins would be floodlighted or spot-lighted for evening observation."

This idea of displaying groups of plants was worked out as an unusual feature in another plan, by the use of partitions to separate plants and flowers. This, according to the designer, made it possible to give all-around group displays, such as one might find in a flower show.

This subject will be continued in the next issue, telling of terrace displays, display stands and inside display areas.

#### LONG ISLAND AGENTS.

The first county agents in the United States assigned specifically to work with commercial florists and nurserymen have been appointed in Nassau and Suffolk counties, New York to offer a broader and more effective service.

Fred M. Gordon, a 1942 graduate of Massachusetts State College, was appointed assistant county agricultural agent for Nassau county, July 1. Mr. Gordon has done postgraduate work at Cornell University in the departments of plant pathology, entomology and plant breeding. While at Cornell he worked in Nassau county under an insect and disease control fellowship.

Alfred J. Gianfagna has assumed a similar position in Suffolk county. Graduated from Cornell University in June, after two years at the Farmingdale State School of Agriculture, where he majored in nursery management, Mr. Gianfagna received experience in the growing and selling of perennials and woody plants at Hicks Nurseries, Westbury, L. I., and was with the New York city park department for two years.

The special agents will work with

nurserymen and florists on problems of disease and insect control, soils and fertilizers, and will make necessary soil tests. If a problem is unusual, they will refer it to experts at Cornell University. Mr. Gordon and Mr. Gianfagna will supplement personal

shop, it is necessary not only to handle a large variety of merchandise, but also to provide those items which will make it possible to develop sales the year around.

The end of the war no doubt will release plans some nurserymen have



New Building Housing Colonial Garden Shop, Winnetka, Ill.

contacts with service letters, telephone calls and speaking engagements.

#### MODERN GARDEN SHOP.

When the war altered all plans for ordinary business expansion, a development in the retail nursery field was making itself manifest, not so much in a new direction as in improvement. In some of the more densely populated portions of the country appeared garden shops, sometimes as an adjunct of the nursery premises and sometimes as an independent sales unit. These offered nursery stock in season, spring and fall, and carried not only the supplies and equipment necessary to the garden at those seasons, but catered to the amateur gardener's needs through the summer and sometimes handled Christmas trees and greens in the winter.

To maintain the type of building and personnel necessary to a garden

arbored for garden shops. Already some structures have been built for this purpose. On this page are shown exterior and interior views of the Colonial Garden Shop at 63 Greenbay road, Winnetka, Ill. The location is on an important through highway that connects the North Shore suburbs of Chicago, where residential dwellings are of a high average character and gardens are given much attention by their owners.

Since the building was not ready until almost May, the extent of the business has been surprising. On the side porch are carried perennial and annual plants, where they may have some shelter, while balled and burlapped evergreens are arranged in beds on the other side of the walk along the building. Deciduous shrubs are heeled in at the back.

Inside is carried an extensive line of equipment and supplies, all the way from seed packets up to expensive pieces of lawn furniture and garden statuary.

The manager of the enterprise is Mrs. O. P. Fox, with whom is associated Miss Josephine Hegley, landscape designer. Some planting is done by Bert Clavey for customers who select their stock, while other gardeners carry their selections away with them. The owner is Perry R. Pennington. The flowers shown in the interior view are not stock in trade, but were received from friends on the formal opening day, May 24.

THE SKAGIT GRAIN & SEED CO., Mount Vernon, Wash., is planning to add a nursery department.

THE national apple crop is estimated to be 106,000,000 bushels, fifty-six per cent greater than last year's light crop, but twelve per cent less than the 1935-44 10-year average.



Wide Variety of Equipment and Supplies Carried in New Garden Shop.

## Short Course at Seattle

By Carol Wieting

Designed to fit the needs of nurserymen, landscape architects and gardeners, a 2-day short course was recently presented by the University of Washington Arboretum, Seattle. The many excellent subjects presented were made possible by the cooperation of the western Washington experiment station, local nurserymen and landscape architects. Paul D. Brown, superintendent of the arboretum, acted as general chairman of the course and was assisted by Dr. C. D. Schwartz, horticulturist at the western Washington experiment station, Puyallup, as chairman and moderator. In attendance were persons from all parts of western Washington.

Opening the session July 8, Dr. C. J. Gould, pathologist at the experiment station, lectured on diseases and principles of disease control. Mr. Harrison, extension pathologist at Washington State College, introduced the subject by defining the basic principles of plant diseases. He divided his discussion into treatment of diseases caused by bacteria, fungi, viruses and environmental conditions. Dr. Gould then discussed specific methods of treatment. Some of the many materials used at the experiment station were described. Fermate was recommended as a good control of rust on snapdragons and black spot on roses.

Considerable work has been done at the experiment station on the control of bulb diseases because bulbs

are one of the major horticultural crops in the northwest. Good control of some of these diseases has been obtained through the use of a hot water-formaldehyde bath. A pint of formaldehyde is added to twenty-five gallons of water, which is kept in circulation at a temperature of 110 degrees. Various periods of treatment are required by different types of bulbs.

Dr. E. P. Breakey, entomologist at the experiment station, discussed the control of insects. General classifications of insects were considered and control measures described. The relative effectiveness of the new spray, DDT, was discussed. Good results from DDT have been obtained on boxwood and holly for the control of adults of leaf miners. These should be sprayed during May. Control of two spotted mites on various plants is a real problem with many growers. Fumigation with methyl bromide where possible is the recommended treatment for these mites.

The last discussion of the morning session was led by Karl Baur, soil technician at the experiment station. Many phases of soil improvement were covered. Mr. Baur pointed out that root growth is frequently limited by a high water table. Root growth can be considerably increased by drainage of wet lands to increase the area to which roots can penetrate. Methods of supplying plant foods to soils which had deficiencies were listed. Mr. Baur pointed out that manures are generally low in phosphorus. Many soils in that area are also deficient in this same element; hence, this is one of the most important fertilizers to use. However, care must be exercised in its application. Phosphorus is quickly locked up in the soil at shallow depths if surface applications are made. With this chemical as with other fertilizers, Mr. Baur has found best results are obtained by applications in a furrow at the side of the plants. Where crops are irrigated by overhead sprinkling, a method was suggested for applying fertilizer through the irrigation system. Chemical fertilizers can be dissolved in water and siphoned in the water lines during sprinkling.

After an informal luncheon at the University Commons cafeteria, the afternoon session was opened with a lecture by W. H. Warren, superintendent of parks at Victoria, B. C. Methods of analyzing the value of

street trees were brought out. A good strong central stem is, of course, necessary. Trees less susceptible to disease and insect pests, those with double rather than single flowers, trees not producing any type of fruit and those carrying a good head above street traffic were all considered superior street trees. Mr. Warren listed several trees which were desirable for planting in coastal areas for windbreaks.

A welcome addition to the afternoon session was a demonstrated talk by L. N. Roberson, Seattle. Mr. Roberson has done considerable work in developing commercial greenhouse and propagating equipment, especially that which can be used with electricity. He mentioned some of his developments in greenhouse ventilating equipment, electric hotbed cables and greenhouse humidifiers. Plastic-covered wire lasts much longer than rubber-covered wire for use in heating hotbeds. A humidifier was shown that would automatically maintain the humidity of any greenhouse or propagating structure. Electric fans were highly recommended for circulating the air in greenhouses. These fans have a low-pitched blade that moves only a small amount of air. No draft is made, but the air is circulated, keeping the foliage dry and less susceptible to disease.

Additional material on propagating methods was presented by Carol

[Continued on page 36.]



Dr. C. D. Schwartz, at left, and Dr. John Snyder, extension horticulturist, discussing some aspect of the short course.



Paul D. Brown, manager of the short course and superintendent of the University of Washington arboretum.

## Plant Notes Here and There

By C. W. Wood

For several years I had a planting on a dry western slope far from the hose. There, in what we called the desert, I tried all the plants I could find which were reputedly resistant to drought. Several of these, in addition to the ordinary desert lovers such as cacti, gave satisfactory results, but none was more satisfying than the Iberian snapdragon, *Antirrhinum asarina*. Its ability to get along on little moisture is not its only recommendation, either, for it is a champion long-distance bloomer and pleasing in every way. In spring it commences to show the beauty of its pale yellow snapdragons and continues its merry performance until frosts discourage it. Unfortunately, the plant is not reliably hardy here, although it survives ordinary winters if planted where it has a covering of snow. It grows readily from cuttings; so it is not much trouble to put a few pieces in a frame in late summer to insure stock for the following year. I venture to say that a planting in your show garden would sell many plants to fall customers.

### Some Sages.

While going over an old (1925) notebook one night I came across some observations made when I had a large collection of sages. I thought that the notes on a few species might be of interest today; so I am giving them in brief form.

*Salvia argentea*, judged by its rosette of large, soft, silvered leaves, is a beautiful ornament for a sunny, perfectly drained border; judged by its pinkish-white flowers, it is of little account. It was the practice here in northern Michigan to take out the flower stems after they had made a foot or two of growth. This not only preserved the decorative value of the plant, but added to its life span, because it usually dies after seed bearing. A native of southern Europe, it was not reliably hardy here, for it needs a well protected spot and good drainage more than anything else.

*Salvia azurea* needs no comment. The material in nurseries under this name is usually the taller and better *S. pitcheri*.

*S. bicolor*, which is sometimes listed in seeds at least, is not hardy this far north. It would, however, be a good thing, with its violet and white flowers in tiers on stems which reach two feet or more in summer. I suspect

it is a biennial from its behavior here.

*S. coccinea*, a native sage (South Carolina to Texas and southward in the tropics), is not half appreciated in this country. Just how hardy it is I cannot say; even material from South Carolina is not reliable here. Where hardy, however, it would make a splendid garden plant, with bright scarlet flowers on 6 or 8-inch spikes on stems which may reach eighteen inches in height. It blooms over a long period and lasts well as a cut flower.

The Atlas mountain sage, *S. dichroa*, which one often sees advertised in seeds, is not reliably hardy here. Where hardy, as it should be in the southern states, it would surely make friends among gardeners. It makes a shrubby growth to three feet or more, with pubescent leaves six or eight inches long and blue and white flowers in a raceme to a foot in length. These come in late summer, adding to its value in the garden.

If you see *S. hians* in European seed lists next winter, it will pay you to try at least a packet of them if you do not live in the coldest sections of the country. My interest in the plant was aroused about thirty years ago when I read, in an English publication, a note from the late William Robinson, wherein he gave it

the high praise of calling it one of the best of border sages. Seeds were not much easier to find then than they are now, a condition I am unable to explain, but I have grown *S. hians* temporarily (perhaps because of tenderness in our extreme cold) several times in the intervening years, always with joy in its pretty blue flowers with white lower lips, in whorls of six, on plants to eighteen inches in height.

There is a plant by the name of *S. scabiosaeifolia* which has persisted in this garden for years under shameful neglect that I should like to see tested under different conditions. The name is uncertain, and I do not find it mentioned at all in Hortus, although Robinson has a paragraph on it in the tenth edition of "The English Flower Garden." In any event, the plant that I have corresponds with his description, except that its flowers have a bluish cast to the lower lips. It grows to two feet or more in height with big scabiouslike leaves and large white flowers in June. It has been fully hardy here under open field conditions. If a half-dozen or so investigators would like to try it, I think I could save that many seeds and should be glad to send some to them.

Our western *S. pitcheri*, growing to four feet in good soil and produc-

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ing showers of lovely gentian-blue flowers in early autumn, is, in my opinion, one of the best border plants of its season. It is a plant that should be in every nursery so that every gardener can enjoy its grace and beauty.

The biennial *S. sclarea* (clary of gardens) has a vast and interesting literature dealing with its garden and stillroom uses. Because the plant is well known, it is probably useless to dwell upon it now, but I should like to recommend its variety *turkestanica*. So far as I have been able to determine from material that has been in this garden, the latter is identical with what is known to the trade as the Vatican sage. The plant has far more than ordinary landscape value, especially if it is used in masses. Then its stately height of three feet and the showy white flowers in even showier lavender-pink bracts which adorn the plant all summer (contrary to what one reads in catalogs) make it an attention-arresting ornament. Both the type and the variety mentioned are little more than biennials, although they do self-sow in congenial surroundings.

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that you mean the garden hybrids, which the literature tells us are the result of selection through the years and of crossing *Heliotropium arboreum* (*H. peruvianum*) and its near relative, *H. corymbosum*. As a matter of fact, one could mean any of the 250 or more species which botanists have described. Curiosity has led me to try all that I have been able to find, but my curiosity has rarely been rewarded with anything of great garden value. As the genus is mostly confined to the warmer parts of the

world, it is only natural that the annuals, of which there are scores, are the ones of most promise in the north; however, my experience so far has brought out little of value among the annuals. There was one Texan, *H. convolvulaceum*, among the perennial kinds which impressed me as a likely candidate for a prominent garden role if some of our Texas friends would only make it available. Incidentally, there are hundreds of similar opportunities in plains' plants.

[Continued on page 41.]

# Maryland Meeting

By George S. Langford

With over 150 in attendance, the Maryland Nurserymen's Association held its summer get-together July 30. The day was spent discussing new developments in horticulture with plant scientists from the United States Department of Agriculture. Morning activities were under the auspices of the bureau of plant industry at the Beltsville research center, and the afternoon was spent at the plant introduction gardens at Glenn Dale.

The meeting was called to order by President L. H. Willis, and the address of welcome was made by Dr. F. P. Cullinan, assistant chief of the bureau of plant industry, who also briefly outlined the experimental work in progress for the benefit of the nurserymen.

Fruit breeding work at the station was discussed by Dr. J. R. Magness. A special tour was conducted for those interested in fruit work. The work on disease resistance in pears, strawberries and grapes, as well as on new peach varieties, was reviewed.

Dr. S. L. Emsweller, who organized and conducted the tour through the research center, discussed research pertaining to the breeding of lilies and hardy chrysanthemums. Other eminent plant scientists taking part in the program were R. L. Pryor, N. W. Steward, L. P. McCann, Philip Brierley and D. V. Lumsden. Topics discussed by them included new azaleas, phlox and tetraploid snapdragons; virus diseases in gladioli and carnations; breeding carnations and stocks; gravel culture, and the utilization of vermiculite for the germination of seeds.

In the field of pest control Dr. W. D. McClellan discussed soil fumigation for fungus diseases, fertilizer and corm treatments for gladioli and the results obtained from fungicide and hormone treatments of cuttings and lily scales. Dr. Floyd Smith displayed and demonstrated equipment for the application of aerosol sprays, and Dr. R. A. St. George reported on the effectiveness of DDT in boxwood leaf miner control.

Following the showing of an interesting display of injurious plant nematodes and equipment for fumigating soil to control these pests by Dr. G. Steiner and his associates, the group had lunch and traveled to the plant introduction gardens.

At the plant introduction gardens the nurserymen were entertained by

F. C. Bradford, V. T. Stoutemyer, Albert W. Close and W. E. Whitehouse. Research projects at that station which were of interest to all included "cellar" propagation of plants under fluorescent lamps, the utilization of shredded sphagnum moss for seed germination, methods of plunging potted plants in sphagnum and peat to save labor and the utilization of sphagnum moss as a growing medium for plants which are to be shipped.

## NEW TRADE-MARK LAW.

While less common in the horticultural field than in manufacturing industries, use of trade-marks has been found of advantage by nurserymen in recent years. They may find further protection under the mod-

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ernized statute lately signed by President Truman.

The Lanham act replaces the trademark act of 1905, which suffered a number of defects. The 1905 statute specified that common-law rights of owners of trade-marks shall not be impaired, a proviso that limited the usefulness of the law. The Lanham act goes far beyond its predecessor in codifying trade-mark law, making full use of the authority granted Congress under the commerce clause of the Constitution to do so.

Most helpful is the provision that continuous use of a trade-mark for five consecutive years makes it incontestable. Too often the owner of a trade-mark has found that his rights have been questioned under the common law after a long period of use. He now enjoys specific statutory protection. Furthermore, the new statute authorizes registration of the same

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or similar marks by more than one user, where both have adopted and used it in good faith in different parts of the country prior to application for its registration.

"Collective and certification marks," as well as trade-marks in the narrow sense, may be registered under the new trade-mark act. This applies to indications of regional origin, like "Idaho" for potatoes, and terms referring to material, mode of manufacture, quality or other characteristics that are recognized as "certification marks."

The law takes cognizance of the fact that trade-marks are playing an increasingly important role in international trade. It is provided that treaty obligations assumed by the United States through membership in the International Union for the Protection of Industrial Property and the Washington-Pan American convention become part of our trade-mark law.

This measure, pending before Congress for eight years, is notable for its strengthening and improvement of American trade-mark law.

#### NEW YORK CHANGES.

The Allied Retail Nurserymen's Association will become the Eastern New York Nurseryman's Association upon adoption of its newly proposed constitution and bylaws. Membership in the American Association of Nurserymen is to be a requisite for election to any office in the local association.

Two members of the New York State Nurserymen's Association have been appointed to the advisory council of the school of horticulture at the Long Island Agricultural and Technical Institute at Farmingdale.

Howard Taylor will represent the state association, and Cliff Sammis, who has been a member of the advisory council since its inception, will represent the Long Island Nurserymen's Association. Both men have been active in the 2-day school for nursery employees which has been held the past two years at Farmingdale. Eight other state and national horticultural groups are represented on the advisory council.

J. DOYAL NICHOLSON recently entered the retail florists' and nursery business at Edmond, Okla.

FRANK SANCHEZ, recently discharged from the army air forces, has started the Mission Road Nursery at Los Angeles, Cal. Mr. Sanchez was formerly in the landscaping business at Los Angeles for eleven years.

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# West Virginia Meeting

By F. Waldo Craig

The eighth annual meeting of the West Virginia Nurserymen's Association, at Bluefield, July 5 and 6, was notable for the continuation of assistance on public projects begun during the past year, as well as the program of the meeting itself, which afforded members a fine time. Guest speakers for the meeting were Gustaf E. Malmborg, landscape gardener, Masonic Homes, Elizabethtown, Pa., and Prof. Ray S. Marsh, head of the department of horticulture, University of West Virginia, Morgantown.

In his address Mr. Malmborg said: "In spite of the higher cost of production, a reputable nursery should carry in stock a certain amount of dwarf evergreens, because the time will come when the public will demand more permanence in the home planting." He described the dwarf hemlocks of which he was most fond. Favorites mentioned were the Sargent weeping hemlock and *Tsuga canadensis macrophylla*, *fremdi*, *globosa* and *minima*. Among the pines he considered *Pinus sylvestris watereri* to be superior, but *P. strobus nana*, *P. densiflora globosa* and *umbraculifera* were mentioned as good and well worth growing. Dwarf spruces mentioned included *Picea glauca albertiana* and *P. glauca nana*.

In the course of Mr. Malmborg's remarks he stated: "There are a few pests that you will have to watch for, the first being red spiders. They will raise havoc with the plants if not attended to promptly. Another insect that attacks the dwarf spruces is a webworm that is rather new on these plants, but just the same it is rather serious." In conclusion he advised those in attendance to pay more attention to the better flowering shrubs and recommended stewartias and sorbarias. He said that one of the stewartias is a native of Virginia and Georgia and others are of Asiatic origin.

Prof. Ray S. Marsh was the principal speaker at the banquet. He described nursery practices he had observed while serving as an instructor in the army's European training schools. His lecture was illustrated with many interesting pictures taken while he was in Europe. Professor Marsh also told the group about the University of West Virginia and deplored the lack of facilities there and at other schools to provide training in nursery practices and landscape architecture.

At the business meeting, the committee for writing a code of ethics for the association reported, and each item was discussed. There was no general agreement on proposals, and the committee was asked to incorporate in the code the recommendations of the members and see if it could reword the code so that it would be acceptable to all.

An amendment to the constitution was adopted which schedules the annual meeting for August instead of July. This year, especially, the necessity for holding the meeting in July was a burden on those members who wished to attend the meeting at Miami Beach, and the officers found it difficult to arrange a program. A greater attendance is expected in August. The time and place for the next annual meeting were not established, but the members decided to have a winter meeting at Charleston in February.

New officers elected for the coming year were: President, Norman H. Cole, Cole Nurseries, Bluefield; vice-president, John Young, Bickmore; secretary-treasurer, F. Waldo Craig, state department of agriculture, Charleston.

A record number of new members was secured. They were especially welcomed, as they are largely returned veterans.

B. L. Potter, Potter Nurseries, Huntington, was instructed to extend greetings to the American Associa-

tion of Nurserymen at the Miami Beach convention and to report on the convention at the winter meeting.

Several proposals calling for the participation of the association in state-wide civic programs were discussed. It was suggested that the University of West Virginia should be prepared to train young people who are interested in landscape gardening and that the association should back such a proposal and see that money is appropriated for this purpose. The members had many suggestions on the improvements being made on the state capitol grounds, at Charleston, and on the ways and means of assisting the West Virginia industrial and publicity commission in using the state flower, Rhododendron maximum, in advertising the state. No action was taken on these measures other than to instruct committees to be appointed or to authorize the executive committee to use its own judgment on the action to be taken.

The entire Saturday program took place at the Cole Nurseries, twelve miles south of Bluefield, in Virginia. The members toured the nursery and examined the unusual plants and fine specimens of popular plants being grown there. They participated in demonstrations on the use of new equipment for nursery and landscaping operations. Refreshments were served by Mrs. Cole.

Owen Wood, Wood-Howell Nurseries, Bristol, Va.; Mr. and Mrs. O. Joe Howard, Lindley Nurseries, Inc., Greensboro, N. C.; Ernest C. Clark, Appalachian Gardens, Glade Spring, Va., and J. D. Yeatts, Yeatts Nurseries, Martinsville, Va., were

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- 1 Carload of Magnolia, small flowering trees, etc.
- 1 Carload of Blue Spruce.

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Indiana, Pa.

out-of-state guests and contributed many worth-while suggestions. Many of the members brought along their wives and families.

#### COVER ILLUSTRATION.

##### *Lonicera Henryi.*

A close relative of the common Hall's Japanese honeysuckle is *Lonicera henryi*, the Henry honeysuckle. Although this twining vine has been known since early in the century, it is not common in the trade today. Occasionally it has been found that plants carried under this name are nothing more than a type of Hall's Japanese honeysuckle.

The Henry honeysuckle is a native of west China and differs in several respects from Hall's Japanese honeysuckle. To the botanist the difference lies in the flower cluster. The flower cluster of the Henry honeysuckle is subtended by an awl-shaped leafy bract, while this reduced leaf in Hall's Japanese honeysuckle is large and more ovate. The corolla of the flower is only about one-half as long, three-fourths of an inch, as that of Hall's Japanese honeysuckle. To the nurseryman and landscape gardener the differences between these two vines are most apparent in the color of the flower and the shape and size of the leaf. The flower of the Henry honeysuckle is yellowish-red in color, and the leaf is narrow and long-pointed. Hall's Japanese honeysuckle has a white flower fading to yellow, and the leaf is more oblong with a more rounded point. The leaf type of the Henry honeysuckle is apparent in the cover illustration.

Both of these honeysuckle vines bloom from late May until August or early September. Black fruits are common on both in the fall. Hall's Japanese honeysuckle is somewhat hardier, which undoubtedly accounts for its more frequent use. The Henry honeysuckle has no particular cultural requirements. It will do well in sun or nearly full shade. It deserves more attention both as a vine and a ground cover because of its striking foliage.

L. C. C.

THE COLUMBUS NURSERY, Columbus, Ga., recently opened a florists' shop. W. L. Weaver and L. H. Certain are the owners.

PAUL W. AUKEMAN, son of Mark Aukeman, proprietor of the Hollandia Gardens, South Vienna, O., was recently discharged from the army and has returned home after thirty-nine months in the service.

## CANADIAN HEMLOCKS and UPRIGHT YEWS

*Taxus Hicksi Capitata*, 3 to 4 and 4 to 5 ft.

*Some Hicksi*, 5 to 6 ft.

Also *Cuspidata*, 24 to 30 and 30 to 36 ins.

*Hemlocks*, 3 to 4, 4 to 5, 5 to 6 and 6 to 7 ft.

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# Pennsylvania Conference

By R. P. Meahl

More than fifty persons were registered for the nurserymen's conference held July 22 to 24 at State College, Pa., sponsored by the department of horticulture of Pennsylvania State College. The meeting was opened with an address of welcome by Dean Lyman E. Jackson, of the school of agriculture.

"Fertilizing and Soil Management Problems in the Nursery" was the topic of A. E. Cooper, assistant professor of agronomy extension, who showed colored slides of his work in soil management on nurseries in the Philadelphia area. He particularly stressed the laying out of nursery blocks according to contours and recommended the use of cover crops to build up the organic material of the soil. A mixture which should be satisfactory was one containing sixty per cent bluegrass, thirty per cent rye grass and ten per cent redtop. The number of queries from the audience during the question period which followed indicated a wide interest in the subject.

R. S. Kirby, professor of plant pathology extension, discussed "Diseases Affecting Nursery Plants and Their Control." He showed slides illustrating the results of diseases on plants and pointed out some of the symptoms to look for in diagnosing troubles. As a general rule, prevention is a better method of control than trying to cure the plant after it is diseased.

In discussing the topic "Know Your Insect Pests and How to Control Them," V. R. Haber, associate professor of zoology, set up a large display of mounted insects in various stages of development which are likely to infect ornamental plants. He stressed the great number of insects known and the difficulty in trying to recognize all that might be found on nursery plants. He explained the different methods of insect feeding and pointed out that a stomach poison was necessary to control chewing insects and that a contact spray or dust was necessary for sucking insects. For the majority of chewing insects, arsenate of lead is the standard stomach poison, and nicotine sulphate is satisfactory as a contact spray. Mr. Haber cautioned against using DDT and expecting it to be a cure-all for insect pests. It will control some types but not others. It is particularly ineffective against mite and may cause its increase by killing off its

natural enemies. There is need for more research in the use of DDT.

Three sessions on "Identification of Plant Material" were led by R. P. Meahl, associate professor of ornamental horticulture. Various characteristics were pointed out by which plants may be identified. The method of making and using a key was explained. The usual method is to use two directly opposite characteristics and divide the plant groups accordingly. This process is repeated until no further division can be made.

Among the trees discussed as being particularly worthy of greater use in most sections of Pennsylvania were Acer ginnala, Amur maple; Acer saccharum, sugar maple; Cercidiphyllum japonicum, katsura tree; Cercis canadensis, eastern redbud; Chionanthus virginicus, white fringe tree; Cladrastis lutea, American yellowwood; Cornus florida, flowering dogwood; Cornus mas, Cornelian cherry dogwood; Fagus sylvatica, European beech, and Ginkgo biloba, ginkgo. Also recommended were Gymnocladus dioicus, Kentucky coffee tree;

Koelreuteria paniculata, panicle golden-rain tree; Liquidambar styraciflua, American sweet gum; Liriodendron tulipifera, tulip tree; Nyssa sylvatica, black tupelo; Quercus borealis, northern red oak; Quercus palustris, pin oak; Sophora japonica, Japanese pagoda tree; Tilia cordata, little leaf linden, and Ulmus americana, American elm.

"Principles of Plant Design" was the subject of a discussion led by John R. Bracken, professor of landscape horticulture. By the use of slides and charts he showed the various effects that can be secured by the proper placing of plant material. He stressed the importance of using material that blends well in making a mass effect in borders and around buildings.

E. I. Wilde, professor of ornamental horticulture, showed colored slides of "Small Gardens of Philadelphia," views of some of the outstanding gardens in that area. They demonstrated clearly the effects that can be

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Yellow  
Rose



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Easy to grow and long to live.  
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Azalea Mollis, 1 Tr. .... \$0.10 \$0.09  
Rhododendron Hyb., 1 Tr. .10 .09

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Not less than 25 at 100 rate; 300 at 1000 rate. Packing Free. Cash with order; no C.O.D.

Beetle certification furnished upon request.

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Norway Maples

6 to 8 ft., trans., \$45.00 per 100. 6 to 8 ft., 1/2 to 1-in. cal., whips, \$75.00 per 100. 8 to 10 ft., 1/2 to 1-in. cal., well branched, \$10.00 per 10; \$85.00 per 100. 8 to 10 ft., 1 to 1 1/2-in. cal., well branched, \$12.50 per 10; \$100.00 per 100.

1 1/2 to 2-in. cal. (in the ground), \$1.50 each, plus 25¢ dug bare root. 1 1/2 to 2-in. cal. (in the ground), \$2.00 each, plus 35¢ dug bare root. 1 1/2 to 2-in. cal. (in the ground), \$2.25 each, plus 40¢ dug bare root.

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achieved by good planning and the proper choice of material.

The highlight of the conference was the banquet held Tuesday evening, July 23, at which John M. Stoudt, vice-president of the Farr Nursery Co., Weiser Park, spoke on "Methods of Selling That Pay." Although there is no problem in selling nursery material now, he warned that it is time for nurserymen to prepare for the return of competitive business. Courteous treatment of the client, neatness of dress and promptness in serving the customer will all pay dividends. A nurseryman should be sure to know his inventories, because confidence is lost if an item is sold and then cannot be delivered. Above all, honest and fair treatment of the customer is essential for a good business foundation.

## DESIGNATE BLISTER RUST CONTROL AREAS.

Administrative instructions designating the states or parts of states into which the interstate movement of gooseberry and currant plants is prohibited or into which they may be moved only when accompanied by control-area permits have been issued by the bureau of entomology and plant quarantine of the United States Department of Agriculture. European black currants are exceptions under provisions of the federal white-pine blister rust quarantine.

The states of California, Connecticut, Delaware, Georgia, Idaho, Maine, Maryland, Massachusetts, Michigan, Minnesota, Montana, New Hampshire, New Jersey, New York, North Carolina, Ohio, Oregon, Pennsylvania, Rhode Island, Tennessee, Vermont, Virginia, Washington, West Virginia and Wisconsin were designated in part or in their entirety as control areas, effective July 10. These are the areas in which 5-leaved pine is protected from infection with the white-pine blister rust disease, which is spread by gooseberry and currant plants as alternate hosts, by removal of such plants in the vicinities of pine stands.

FORMERLY a captain in the armed forces, Lyman B. Curtis has joined his father, George L. Curtis, in the operation of the Genesee Nurseries, Flint, Mich. The younger Curtis was graduated from the University of Michigan in 1941, where he majored in landscape architecture. A moderate expansion program is being initiated at the nurseries, where an addition to the packing shed is now under construction.

## HOLLAND-GROWN STOCK

Following is a partial list of material to be imported from Holland.

Azalea Mollis Seedlings, large flowers, bright colors. Per 100

Azalea Mollis, seedlings, 12 to 15 ins. \$85.00

Azalea Mollis, well budded, 15 to 18 ins. 110.00

Azalea Mollis, well budded, named varieties, 12 to 15 ins. 125.00

Azalea Mollis, well budded, named varieties, 15 to 18 ins. 150.00

Azalea Pontica (Ghent Azaleas), 12 to 15 ins. 125.00

Azalea Pontica (Ghent Azaleas), 15 to 18 ins. 150.00

Azalea Pontica (Ghent Azaleas), 18 to 24 ins. 200.00

Young Azaleas for growing on.

Azalea Mollis, mixed colors, 8 to 12 ins. 50.00

Azalea Mollis, J. C. Von Tol, red, 8 to 12 ins., not budded. 50.00

Chamaecyparis obtusa Nana, 1-yr. tr. 70.00

Chamaecyparis obtusa Nana, 6 to 8 ins. 80.00

Cornus Florida Rubra, 2 1/2 to 2 ft. 125.00

Cornus Florida Rubra, 2 to 3 ft. 175.00

Cotoneaster, several varieties 2-yr. tr.

(List on application) 17.50

Crataegus oxyacantha, double white and Paul's Scarlet, 1-yr. grafts. 30.00

Cydonia Jap., orange-red, 2-yr. tr. 12.50

Cydonia Jap., single red, 2-yr. layers. 25.00

Euonymus Alatus, 12 to 15 ins. 30.00

Hydrangea P.G., 1-yr. liners, 12 to 15 ins. 15.00

Hydrangea Petiolaris, climbing, 2-yr. liners, 12 to 15 ins. 25.00

Hypericum Moserianum, golden-yellow, 12 to 18 ins. 25.00

Jasminum nudiflorum, 2-yr. cuttings. 15.00

Kerria Jap. Pleniflora, 1-yr. cuttings. 12.00

Laburnum Vossi, 1-yr. liners, 12 to 15 ins. 30.00

Laburnum Vossi, 4 to 5 ft., whips, cut back. 50.00

Laburnum Vossi, 2 to 4 ft., bushes. 75.00

Laburnum Vulgar, 1-yr. seedlings. 1000, \$45.00

Magnolia in the following varieties: Alba Superba, white; Alexandrina, rose-purple; Soulangiana, rose-pink, and S. Nigra, dark purple.

Transplanted layers, 2-yr., 10 to 12 ins. 95.00

Field-grown, established, 15 to 18 ins. 125.00

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Prunus, finest double pink, whips. 65.00

Rhododendron Hybrids. Grower's selection of varieties.

Selected, well budded, 15 to 18 ins. 150.00

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Rhodo. Catawbiense, XX tr., layers. 60.00

Rhodo. Catawbiense, selected, well budded, 15 to 18 ins. 125.00

Rhodo. Catawbiense, selected, well budded, 18 to 24 ins. 150.00

Rhodo. Catawbiense, selected, well budded, 2 to 2 1/2 ft. 190.00

Rhodo. Ponticum, grafting size. . . . .

Per 1000 \$125.00

Rosa Canina and Multiflora for budding, price on application.

Prices are F.O.B. Hoboken, N. J. Freight and duty are paid. Packing at cost. Not less than 25 of any item.

Liners and small items not less than 100. Because of repacking difficulties prefer case lots only. Cannot handle small orders satisfactorily. Hope to have by September 1 complete mimeographed list of Holland-grown stock and stock grown in the eastern U. S. for lining out.

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## GENERAL LINE OF ORNAMENTALS

Fall catalog September 1

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Splendid Stock

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MILFORD DELAWARE

# On and Off the Nursery

By L. C. Chadwick

## TRANSPLANTING PRACTICES.

The basis of all successful transplanting operations is the careful selection of suitable plant types. It is important to know the soil and exposure requirements of the plant, its moisture requirements and something of its relative susceptibility to serious insects and diseases. Select sturdy types, those that are hardy and, especially with trees, those that have made good terminal growth during the past few years.

Commercial practices regarding the removal of burlap when balled and burlapped plants are planted vary greatly. Some vary the practice with the grade of burlap and the condition of the ball. It is my opinion that the burlap should be removed whenever possible. This is particularly true when heavy burlap is used. Slitting or rolling down the burlap is a substitute measure for removal of the burlap. With trees, and other plants that need it, if they are properly staked or guyed following the planting operation, it makes little difference if the ball is broken in the removal of the burlap. The roots will not be injured if the ball breaks after the plant is in the hole and the backfill is ready to be put in. The removal of the burlap allows for better movement and distribution of water and, consequently, better root growth.

Proper aeration and sufficient moisture are prerequisites for satisfactory root growth. In planting, care should be taken to be sure that oxygen and moisture bear proper relationship to one another. Often trees, shrubs or evergreens dug from a heavy clay soil arrive at the planting site with the outer inch or more of the soil ball sufficiently dried out to form a hard crust. Balls planted in this condition are not conducive to rapid development of new roots. The crust may be so hard that it inhibits ready movement of air and water to the roots, and furthermore, the new roots penetrate the crust slowly, if at all.

At least two methods of procedure are possible in handling balls in such a condition. One method consists of puncturing the ball. This can be accomplished with a 1½-inch soil auger, drilling holes to various depths of twelve to eighteen inches, and every two to four feet apart, into the top of the ball. Fill the holes with sandy soil or one containing considerable

peat moss. The uneven depth of the holes will allow the whole soil ball to be soaked more evenly when it is watered. This method should prove satisfactory if the soil is not too heavy or the crust too hard. If this method is all that is necessary, delay the operation until after the backfill has been made.

The other method is the most drastic, but often the more satisfactory. This consists of forking off six to twelve inches of the ball and replacing it with good soil as used in the backfill.

Only good soil should be used about the roots or about the soil ball. In planting, the common suggestion is to pack the soil firmly beneath the ball so that all air pockets are avoided. It may be that we worry too much about air pockets. The thorough packing and tamping of the soil around the ball may be more detrimental than a few small air pockets. Large air pockets should be avoided. I see no objection to packing the soil rather firmly beneath the

ball. This will help keep the plant to the perpendicular. Other than the soil beneath the ball, the amount of tamping and watering at planting time should depend upon the soil type and its moisture content. Heavy clay soils or others of high moisture content should not be trampled or tamped too firmly. Tight packing of such soils may result in the exclusion of a necessary amount of soil air and poor root response. Add the soil in successive 4 to 5-inch layers, packing each less firmly as the top of the hole is approached. Leave most of the backfill, particularly the upper half, loose and mellow.

There exists considerable controversy over the practice of fertilization at planting time. I believe the addition of some commercial fertilizer at the time of planting is an advisable practice with plants moved with a ball and may be added with caution with bare-root plants. One-half pound of 4-12-4 or one pound of twenty per cent superphosphate

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2-year Standard Apple, Sweet and Sour Cherry, Plum and Standard Pear. Also 2-year Shrubs, bushy, well rooted, twice transplanted.

Evergreens, three times transplanted, properly sheared, earth balled, or moss balled. Mail us your list of wants.

We would appreciate your surplus list; we need Roses, Berries, certain varieties of Ornamental Trees, Vines, etc. Write for our surplus and want list.



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Pink, white, red, bronze, \$4.00 per 100, \$97.50 per 1000. **YELLOW CUSHION** and **LITTLE BOB**, \$6.00 per 100, \$35.00 per 1000. **NEW GOLD CUSHION**, \$10.00 per 100.

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Collected Native Stock	Per 1000
3 to 6 ins.	\$ 6.00
6 to 9 ins.	10.00
9 to 12 ins.	18.00
12 to 18 ins.	25.00

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Small Evergreens  
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## PEONIES EVERGREENS

Our special Preliminary Price List of plants for early Fall shipment, now ready, offers better than 250 varieties of Peonies as well as a choice assortment of Evergreens.

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Wholesale growers of the best  
Ornamental Evergreens,  
Deciduous Trees,  
Shrubs and Roses.  
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**BURTON'S**  
HEADQUARTERS FOR  
EVERGREEN GRAFTS, TRANSPLANTED  
EVERGREENS, SHRUB LINERS.  
RARE ITEMS YOU DO NOT  
FIND IN MOST LISTS!  
Write!  
**HILLTOP NURSERIES**  
CASSTOWN, OHIO

mixed with four bushels of backfill soil is adequate.

While professional plantsmen know the importance of removing labels from newly transplanted plants, they sometimes fail to emphasize the importance of this operation when giving instructions to their clients. Besides constriction and injury to the branch, some plants, such as roses, are subject to injury from the toxicity of copper wire even though constriction does not occur. L. C. C.

### FACE LABOR SHORTAGE.

Unless a nurseryman is in a favorable area with regard to labor supply, he should retain the methods he adopted in wartime to obtain and hold help. Recruiting of woman and boy workers is likely to be necessary for some time, particularly if the expansion of nursery operations requires all the additional men hired. Training programs and other inducements will be needed to secure the employees necessary in most sections.

The rapid expansion of industry as the change-over from war operations is completed, the cessation of strikes and the lessening of OPA price handicaps have created a demand for help in factories and offices that has rivaled wartime stringency in some places. Since no early relief can be seen, nurserymen must be alert to bid for and hold the labor they will need for their increased volume of business.

Special attention will need to be directed to new and unskilled workers, who display an unwillingness to accept a normal starting rate of pay. In the absence of wartime wage controls, there is an inflationary threat in this situation. To keep starting wages in line with those for experienced and skilled labor, interest in nursery work and training may need to be stimulated. Certainly critical selection of new employees will be necessary, for a high starting pay cannot be given to all comers if the nursery is to be operated efficiently and at a profit.

The situation in his locality will guide the individual nurseryman in his attention to this problem, which is likely to remain urgent for some time in most communities near industrial centers.

KENNETH G. STEIN, son of Walter F. Stein, Enterprise Nurseries, Wrightsville, Pa., enlisted in the navy, November, 1945. He is now a seaman first-class, stationed at Panama in the fifteenth naval district.

## LARGE STOCK— GOOD ASSORTMENT— EVERGREENS

Send us your  
list of wants  
for quotations.

### OR BETTER STILL—

Come and  
See them for  
Yourself!

**WILLIS NURSERY CO.**  
Ottawa, Kansas

## WE OFFER For Fall Shipment

Flowering Shrubs	Privets
Shade Trees	Evergreens
Vines	Ferns

### TREE SEEDS

Cut Holly and Hemlock for Christmas decoration.

Ask us about truck and carload lots. We can deliver at your nursery at reasonable rates. Ask for our trade list, ready now.

**O. H. Perry Nursery Co.**  
Box 545 McMinnville, Tenn.  
Telephone: 375X

## EVERGREENS WANTED

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12 to 18 ins. and 18 to 24 ins.

**C. A. BENNETT**  
467 Hamilton Ave. Trenton, N. J.

## NOVELTY PERENNIAL and ROCK GARDEN PLANTS

Wholesale Trade List now ready.  
Send for your copy.

**CARROLL GARDENS** Westminster, Md.

# New Sphagnum Moss Uses

By E. Sam Hemming

At the recent summer meeting of the Maryland Nurserymen's Association, held at the United States Department of Agriculture horticultural research center at Beltsville, Md., and its companion plant introduction station, at Glenn Dale, Md., new vistas in plant propagation and culture were unfolded. The work done there will doubtless furnish information for many volumes, and the work done on just one phase of plant culture may radically change many of our former habits and methods in the production of plants. The new and extensive uses made of sphagnum moss are notable among the many experiments.

As most nurserymen are aware, the use of sphagnum moss as a medium in which to germinate seeds has been in vogue for some years. Sphagnum moss provides a suitable medium in which moisture and air remain ideal for germination. In addition, it is 100 per cent proof against damping-off. For those not familiar with the system at the research center, metal flats with drainage holes are used. A sheet of spun glass covers the holes to prevent excess drainage. The sphagnum is firmed, then soaked, and the seeds are sown on the surface. The flats are covered with glass, or similar cover, and not watered again. Even extremely fine seeds can be germinated in this way. Dr. S. L. Emsweller, principal horticulturist, stated that in chrysanthemum breeding work where previously only a small percentage of germination was obtained, now so many plants resulted that thousands had to be thrown away. As you know, chrysanthemum seeds are very fine and are borne in great quantity. The small seedlings, when pricked out, may be just pulled out by hand. All seeds of new foreign plants are now germinated by the sphagnum method, according to Mr. Close, of the introduction station.

But the use of sphagnum moss to germinate seeds is but one of its many new uses. In their efforts during the war to propagate good strains of cinchona for South American countries, to be used in turn as quinine in this country, it was found that sphagnum moss made an ideal rooting medium for these cuttings. In using it, Dr. V. T. Stoutemyer and his associates evolved a type of "greenhouse" that is novel in the extreme. It consists of a cinder block dugout with a frame, insulated roof

of absolutely opaque material. It has one door with a ventilator fan over it. The building is heated when necessary by an electric bathroom heater.

The cuttings were placed in sphagnum moss, moistened once, in benches or flats similar to those in the conventional greenhouse, and set under fluorescent lights. As Dr. F. C. Bradford, superintendent of the Glenn Dale station, put it, the boss could go away Friday and come back Monday, or even Tuesday or Wednesday. In fact, some cuttings were given no attention except that provided by the automatic thermostat for the five weeks required for rooting. This phase of the work is still undergoing additional tests, such as the use of intermittent light and the use of neon and other colored lights.

Still another phase of the work at the experiment station with the use of sphagnum moss came to light in their work on cinchona. In shipping the potted plants to South America by boat the greatest of success was

never above fifty per cent. With the outbreak of the war, the only possible method of shipping was by air, and shipping the plants bare root was futile. The experiment staff tried planting and growing the little plants in sphagnum moss and met with complete success. In fact, between ninety-eight and ninety-nine per cent of the plants survived shipment. Dr. Bradford removed a plant from a 4-inch pot and tossed it to one of the visitors, who found it as light as a sponge. Then he took it by the top and bounced it on the potting shed table, and yet the ball remained absolutely intact.

The plants are grown in the sphagnum moss and are fed by the simple device of watering them about every two weeks with a solution containing one tablespoon of 5-8-5 or 4-12-4 fertilizer to a gallon of water. When it is desired that the plants stop growing for shipping purposes, the solution is withheld. In an open greenhouse a plant in sphagnum moss need be watered about once a week compared to plants in soil being watered once a day.

Another use of sphagnum moss is as a medium in which to plunge pots in the greenhouse bench. By so doing, watering is reduced to the in-

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quency of once a week or once in two weeks. The dangers of over-watering (which is impossible with sphagnum moss) and drying out (which, as every florist with inexperienced help knows, ruined many a crop in the benches) are both removed. It has also been found that the sphagnum-grown grafts in the opaque greenhouse were quite successful.

It is obvious that nurserymen who are able to should visit these two stations. If this is impossible, it would pay them to obtain all the information they can about the experiments, for it is quite likely that these new uses of sphagnum moss will radically alter both costs and methods of handling and propagating young nursery stock.

**WILLOW LEAF BEETLE.**

Browning of the foliage of willow trees at this time may be due to feeding by the willow leaf beetle.

The adult beetles are small (about three-sixteenths of an inch long) and a metallic, greenish blue in color. They feed upon the surface of willow leaves, until only a network of veins is left. In heavy infestations, most of the leaves may have brown skeletonized areas, and many leaves that are entirely skeletonized drop prematurely.

The beetle seems to be particularly fond of black, yellow and shiny willows, and these species are most seriously attacked. The weeping willow and pussy willow are less likely to be heavily fed upon. The beetles also sometimes attack Lombardy poplars.

Spraying both surfaces of the foliage gives good control of the beetle. Lead arsenate or derris may be used. If lead arsenate is applied, use five pounds of lead arsenate and twenty fluid ounces of fish oil or linseed oil mixed with 100 gallons of water. Two pounds of derris plus one quart of oil in 100 gallons of water will give effective control. If infested willows are near a residence, omit the oil adhesive, which has an unpleasant, clinging odor.

**FLOWER ACRES NURSERY**, Northville, Mich., is in operation again, after being closed during the war for lack of help.

**DELBERT A. SMITH**, who recently sold the Lincoln Highway Nursery, Upper Sandusky, O., to Edwin Steinmetz, has gone out of the retail business and expects to grow lining-out stock for the wholesale trade.

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2 to 6 ins. in 2 -in. bands, \$8.00 per 100.  
6 to 9 ins. in 2 1/2 -in. bands, \$12.50 per 100.  
12 to 18 ins. in 2 1/2 -in. bands, \$18.00 per 100.  
Will ship about Aug. 10. Only 2,000 left.  
Now booking 1947 spring and fall deliveries.

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# Trade Meetings

## NEW YORK MEETING.

The 3-day meeting of the New York State Nurserymen's Association begins at Cornell University, Ithaca, August 15, with the August 16 session at the Geneva agricultural experiment station and the final session at Rochester, August 17.

Opening the program will be demonstrations in weed control, with Dr. F. B. Wright, associate professor of agricultural engineering, demonstrating the Sizz weed burner, and Dr. A. M. S. Pridham, assistant professor of ornamental horticulture, showing the use of 2,4-D for lawn weeds. Dr. William Blauvelt, assistant professor of economic entomology, is giving a demonstration of DDT dusting.

After luncheon at Willard Straight hall, a business meeting is scheduled. At an evening round table there will be discussion of on-the-job training for veterans, industrial and labor relations, stock replacements and sales grounds.

Those attending Friday's session will meet at Jordon hall, at the Geneva experiment station. Karl Brase, pomological investigator, will discuss "Germination Tests with Peach Seeds." "The Storage of Nursery Stock and Planting Practice in Relation to Quality and Survival" will be discussed by Mr. Brase and Dr. R. W. Bledsoe, associate agronomist at the Florida agricultural experiment station, Gainesville.

Following luncheon at the Seneca hotel, Dr. F. A. Lee will discuss "Frozen Fruit Products," and Mr. Brase will give details of "The Performance of Apple Varieties on Malling Understock." "New Phases of Pest Control in the Nursery" is the topic chosen by Dr. F. L. Gambrell.

A morning tour of Rochester parks, under the direction of William Pitkin, superintendent, will be the feature of the August 7 meeting, after which luncheon will be served at the University Club.

## GROUP INSURANCE PLAN.

A resolution endorsing a plan which provides group life, accident and health insurance for all classes of employees of employer members was adopted July 2 at the meeting of the Long Island Nurserymen's Association.

Under the plan, those employees hired prior to May 1, 1946, are eligible for compensation with the inception of the plan. Thereafter, any

employee who completes six months of employment shall be eligible. The plan allows \$1,000 life insurance, \$1,000 accidental death and dismemberment insurance and \$15 weekly sickness and accident benefit.

Each employer member has been assessed \$1 per employee on the first month's premium. This is to provide funds to be used for administrative expenses, although it is expected that this charge will be less per employee in the future. Each member is expected to make a payment in advance, approximating one month's premium.

The trust indenture has been signed by three trustees appointed at the July 2 meeting of the association, Jac Bulk, Howard Taylor and Charles R. Mouquin. They are responsible for collecting the premiums from the nurserymen and turning them over to the insurance company.

## INDIANA NURSERYMEN MEET.

The nursery of J. C. Bunch & Son, Terre Haute, Ind., was the scene of the annual summer meeting of the Indiana Association of Nurserymen, August 14. After registration, visits were made to various Terre Haute

nurseries, and the new storage house of the Bunch firm was inspected.

An invocation read by Floyd Bass and a welcoming address by Troy Bunch opened the business meeting. On the morning's program was a report by J. C. Bunch on the American Association of Nurserymen's convention at Miami Beach, Fla.

Following a luncheon served by the hosts, the meeting was resumed with a discussion of "Spraying and Dusting Evergreens," by Prof. J. J. Davis, head of the department of entomology at Purdue University, La Fayette. Frank Littleford, Littleford Nurseries, Vincennes, talked on "Growing Magnolias as a Specialty Crop"; Frank Turner, Berryhill Nurseries, Springfield, O., discussed the "Proper Amount of Shearing and Pruning of Evergreens," and Lowell A. Moore, Anderson, second-place winner in the nation-wide sales grounds design competition sponsored by the National Landscape Nurserymen's Association, spoke on "The Design of Nursery Sales Lots."

**THE HALLA NURSERY & LANDSCAPE SERVICE**, formerly operated at 835 East Lake street, Minneapolis, Minn., is now located at 2636 Hennepin avenue, Minneapolis 8, Minn., under the name of the Halla Nursery.

## STRAWBERRY PLANTS

Missionary  
Blakemore  
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**Evergreens — Shrubs**

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## Fall Trade List-1946

<i>Ashford Juniper</i> , 4 to 5 ft.	\$2.25
<i>Irish Juniper</i> , 4 to 5 ft.	2.00
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<i>Fastigata Juniper</i> , 4 to 5 ft.	2.00
<i>Fastigata Juniper</i> , 5 to 6 ft.	2.25
<i>Greek Juniper</i> , 24 to 30 ins.	2.00
<i>Greek Juniper</i> , 30 to 36 ins.	2.25
<i>Pfitzer Juniper</i> , 24 to 30 ins.	2.00
<i>Savin Juniper</i> , 18 to 24 ins.	1.75
<i>Baker's Arborvitae</i> , 30 to 36 ins.	1.75
<i>Berkman's Arborvitae</i> , 24 to 30 ins.	1.75
<i>White Pine</i> , 4 to 5 ft.	3.00
<i>White Pine</i> , 5 to 6 ft.	3.25
<i>Scotch Pine</i> , 4 to 5 ft.	3.00
<i>Scotch Pine</i> , 5 to 6 ft.	3.25
<i>Mugho Pine</i> , 18 to 24 ins.	1.85
<i>Norway Spruce</i> , 3 to 3 1/2 ft.	2.00
<i>Black Hills Spruce</i> , 18 to 24 ins.	2.00
<i>Mahonia</i> , 18 to 24 ins.	1.85

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## NOTES FROM A NURSERYMAN'S WIFE

Hollyhocks that grow against the garage are kin to those that ancient China grew in orchards for the bees, we read, and radishes, red and round in your best pottery, are cousins of those the Greeks offered to Apollo in bowls of beaten gold.

\* \* \*

Ozark sayings: "No beaux go where hollyhocks grow" (Why, we wonder? Wallflowers?) and "It takes a fool to raise gourds." (And is that nice? Sour grapes, maybe.)

\* \* \*

Strange how we associate qualities with trees. The oak to most of us symbolizes strength, the elm nobility, the birch grace and femininity. To a writer in the St. Louis Star-Times the American beech seems a gray philosopher among trees. We quote:

"*Fagus americana*, the American beech, is one of the stately and dignified trees. Time was, two centuries ago, when great forests of the beautiful trees extended mile on mile. Over much of the new continent beeches and maples were the prevailing hardwoods. But *fagus* isn't aloof and unsociable. Rather he's a sort of elderly philosopher who looks on the frettings and foibles of a harried world with tolerant understanding.

"His cloak is a handsome, smooth, warm gray with patches of darker gray. There are spots of buff and cream in it. In some sections the tree is called the "painted beech." The branches are slim and many times almost horizontal; the buds are a beautiful deep reddish-brown, slender and very pointed.

"Not so numerous now, the gray beeches still stand as monuments of beauty. Alone on the hillsides, in small groves, or in larger stands on the ridges, the gray philosophers are beloved trees. In their calm and friendly tolerance they set an example for men who still fuss and fume over trivialities."

\* \* \*

For nearly fifty years a saw-toothed aspen grew on a tower at Greensburg, Ind. At one time four saplings were growing on the roof of the tower, probably sprouted from seeds dropped by birds. This one survived and lived all these years in accumulated dirt until this spring, when it failed to leaf out. A tree surgeon and steeple jacks left only the stump and one live offshoot, but sight-seers

[Concluded on page 40.]

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Even grade, grown in peat-prepared beds. Handled and packed to reach you in perfect condition. Evergreens ready Sept. 1; Maple, Oct. 10. Per 1000

2000 *Black Hills Spruce*, 4-yr. tr. \$85.00

6 to 8 ins. 60.00

2000 *Black Hills Spruce*, 4-yr. tr. Per 1000

4 to 6 ins. 35.00

1000 *Colorado Blue Spruce*, 5-yr. Per 1000

tr. 6 to 10 ins. 25.00

400 *Canadian Hemlock*, 4-yr. tr. Per 1000

8 to 10 ins. 30.00

200 *Canadian Hemlock*, 4-yr. tr. 20.00

200 *Fraser's Fir*, 4-yr. tr. Per 1000

6 to 12 ins. 25.00

**BLACK HILLS SPRUCE** Per 1000

2-in. seedlings \$20.00

**COLORADO BLUE SPRUCE** Per 1000

2 to 3-in. seedlings 25.00

**DOUGLAS FIR** Per 1000

2 to 3-in. seedlings 30.00

**AMERICAN ARBORVITAE** Per 1000

2 to 3-in. seedlings 20.00

**BARBERRY THUNBERGII** Per 1000

seedlings \$12.00

**HARD or SUGAR MAPLE** Per 1000

6 to 8 ft., branched \$50.00

8 to 10 ft., branched 75.00

**FERNS** Per 1000

**Hardy Ostrich Plume**, 2 1/2 to 3 ft.

Grows most any place. September and

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## NORTHERN-GROWN EVERGREENS

**Juniperus Virginiana Hilli**, 3 1/2 to 4 ft.

**Juniperus Virginiana Hilli**, 4 to 5 ft.

**Juniperus Pfitzeriana**, 2 to 2 1/2 ft.

**Juniperus Pfitzeriana**, 2 1/2 to 3 ft.

**Mugho Pine**, 15 to 18 ins.

**Mugho Pine**, 18 to 24 ins.

**Black Hills Spruce**, 18 to 24 ins.

**Black Hills Spruce**, 24 to 30 ins.

**Taxus Cupidata**, 18 to 24 ins.

**Taxus Cupidata**, 24 to 30 ins.

Also a general line of northern-grown evergreens.

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# Coming Events

## MEETING CALENDAR.

August 15 and 16, Michigan Association of Nurserymen, Hotel Vincent, Ben-ton Harbor.

August 15 to 17, New York State Nurserymen's Association, Cornell University, Ithaca; Geneva Experiment Station, and Rochester.

August 27 and 28, Wisconsin Nurserymen's Association, Port Edwards.

August 27 to 29, Texas Association of Nurserymen, Adolphus hotel, Dallas.

August 27 to 30, National Shade Tree Conference, Hotel Statler, Boston, Mass.

August 29, Ohio Nurserymen's Association, Painesville.

September 3 to 5, National Nut Growers' Association, Ohio Agricultural Experiment Station, Wooster.

September 16 to 18, Oregon Association of Nurserymen.

September 23 to 25, California Association of Nurserymen, Hotel Claremont, Berkeley.

October 8 to 10, United Horticulture, Wade Park Manor, Cleveland, O.

November 17 to 20, American Institute of Park Executives, Jefferson hotel, St. Louis, Mo.

## SHADE TREE PROGRAM.

The twenty-second National Shade Tree Conference, to be held at the Hotel Statler, Boston, Mass., August 27 to 30, will include exhibits and varied entertainment in addition to the regular business and educational sessions.

President Forrest C. Strong will call the first session to order Tuesday, August 27, at 1:30 p. m., and an address of welcome will be given by Maurice J. Tobin, governor of Massachusetts. The program for this session will be sponsored by the National Arborists' Association, and its president, E. W. Higgins, will preside. Discussions will include "On-the-job Training of Veterans for Shade Tree Work," by Edward C. Shearer, Farrens Tree Surgeons, Coral Gables, Fla.; "The Legal Side of Trees," by Edward T. Simoneau, Marlboro, Mass., and "Employer and Employee Relationships," by C. L. Wachtel, Tree Science & Service Co., Wauwatosa, Wis. An award will be presented to the author of the winning essay on "The Origin and Meaning of the Word Arborist."

The following day will be devoted to a business session and a meeting of the board of governors. Prof. Donald Bushey, of the department of ornamental horticulture, Cornell University, Ithaca, N. Y., will speak on "Root Regeneration of Pin Oak and American Elm Following Transplanting in Fall and Spring." Dr. Daniel L. Marsh, president of Boston University, Boston, Mass., will discuss "Trees and Their Contributions to

Mankind," and Dr. Ernst J. Schreiner, senior silviculturist, United States Forest Service, Laurel, Md., will present a talk on "Tree Breeding for Desirable Qualities and Disease Resistance."

Field demonstrations will be held at the Arnold Arboretum, Jamaica Plain, that afternoon, and the National Arborists' Association and city foresters, park superintendents and others interested in public area tree management problems will meet in the evening.

Thursday morning's session will be presided over by A. Robert Thompson, president of the Midwestern chapter of the National Shade Tree Conference. Frank J. Pipal, city forester at Omaha, Neb., will address the group on "Public Education in Arboriculture." "The Over-all financial Situation" will be discussed by Dr. Charles Abbott, professor of business economics at Harvard University. Fletcher Steele, Boston, will present a talk entitled "Tree Values Shift." The history of the National Shade Tree Conference will be given by Norman Armstrong, of White Plains, N. Y.

Session chairmen for the afternoon will be Sam W. Parmenter, president of the Ohio chapter of the National Shade Tree Conference. A panel discussion on new equipment will be led by Fred W. Roewekamp, city forester at Los Angeles, Cal., and will include talks on "Chain Saw and Earth Drill," by Mr. Roewekamp; "Tree

Remover Machine," by W. S. Speed, Columbus, O., and "Aerial Spraying," by William J. Maynard, Arlington, Mass. Talks will be presented that afternoon on "2,4-D Injury to Trees," by Dr. P. P. Pirone, of the New Jersey experiment station, New Brunswick, and on "Troublesome Insects and Diseases in New England and Their Control," by Dr. M. A. McKenzie and Dr. W. D. Whitcomb, of Massachusetts State College. A cocktail hour and the annual banquet will provide entertainment that evening.

Following the business session Friday, Dr. Curtis May, senior pathologist of the division of pathology, United States Department of Agriculture, Beltsville, Md., will report on "Shade Tree Disease Research." A panel discussion of "Environmental and Cultural Requirements of a Selected List of Shade Trees," led by Prof. L. C. Shadwick, of the department of horticulture, Ohio State University, Columbus, will be participated in by E. W. Higgins, Frost & Higgins Co., Arlington, Mass.; Edward Scanlon, Cleveland, O., and Donald Wyman, Arnold Arboretum.

A plant clinic directed by Dr. P. P. Pirone will be the final feature of the 4-day convention.

## WISCONSIN PROGRAM.

The program for the 2-day summer meeting of the Wisconsin Nurserymen's Association will begin at noon August 27, with a luncheon served at the Boys' Club, a large log cabin in the woods on the shore of Nepco lake, about three miles south of Wisconsin Rapids. After luncheon a

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STANDARD VARIETIES	Per	Per	Per
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Klondike, Missionary .....	1.40	2.75	8.50
Klonmore, Premier, Fairfax, Catskill.....	1.50	3.00	9.50
Tennessee Supreme, Tennessee Shipper.....	1.60	3.10	10.00

### EVERBEARING VARIETIES

Progressive .....	1.75	3.40	12.00
Gem, Mastodon, Evermore.....	2.50	5.50	17.00
Gemzata .....	4.00	9.00	25.00
Streamliner .....	6.50	12.00	40.00

### CANEBERRIES

Youngberry .....	6.00	14.00	50.00
Regular Boysenberry .....	6.50	15.00	55.00
Thornless Boysenberry .....	7.50	16.00	60.00

Cold storage available for late spring orders.

Packing-out service available direct to your customers under your tags. No charge made for packing or packages.

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**RED RASPBERRY**, No. 1 Suckers and Transplants. Specializing in Indian Summer, Taylor and Chief. We can at last offer the Indian Summer Everbearer in quantities to warrant your featuring them to your trade.

**BLACK AND PURPLE RASPBERRY**, best varieties in No. 1 tips.

**GRAPEVINES**, all common varieties in 2-yr. No. 1 and 1-yr. No. 1.

**BLACKBERRIES, CURRANTS and other small fruit plants.**

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North Collins, N. Y.

**RED LAKE CURRANTS**

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**Hansen's BUSH CHERRY**

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## FRUIT TREES AND SMALL FRUITS

**HARRISON BROTHERS NURSERIES**

G. Hale Harrison, General Manager  
BERLIN, MARYLAND

## BLUEBERRY PLANTS

are our specialty  
**1, 2 and 3-yr.-old**

*Special prices in  
Wholesale Lots for  
Fall Delivery*

Write for prices to the

**AIRLINE BLUEBERRY FARM**  
606 Butterfield Drive  
EAST LANSING, MICH.

## STRAWBERRY PLANTS

We can book orders now for spring delivery on the following varieties: Mastodon, Gem, Premier, Catskill, Pathfinder, Temple and all other standard varieties.

**H. D. RICHARDSON & CO.**  
Willards, Md.

trip will be made through the nursery of the Nekoosa-Edwards Paper Co., Port Edwards, which is host for the meeting. This nursery is among the most successful forest nurseries in that part of the country. Trips are also planned for that afternoon through the near-by state nursery and cranberry marshes. A banquet will be held at the Boys' Club in the evening. The morning of the second day will be devoted to a tour of the paper mill of the Nekoosa-Edwards Co.

### SOUTHWESTERN NOTES.

L. H. McCoy, who operates McCoy's Greenhouse & Nursery, 204 West Seventy-fifth street, Kansas City, Mo., is selling his business and his home and moving to the Ozarks for his health.

Ralph W. Smith writes from Pasadena, Cal.: "After three years of living in California I have succumbed to the lures of this sunny state and am starting up in business here. Things are much on the boom out here, and business prospects appear excellent." He calls his business the Smith Landscape Nursery. Prior to the war he was located at Topeka, Kan., and during the war he was engaged in defense work.

The Prairie Garden Nursery Co., McPherson, Kan., has bought a tract of land a little over three acres in extent on U. S. highway 81, one mile north of the city. The nursery office and headquarters will be moved to this location, where a building 60x70 feet is under construction. The office, display room and service facilities will be housed in it. A large tract of land adjoining this property has been leased for the production of nursery stock. The plan is to emphasize the landscape business in the future. The firm recently hired a new foreman, Raymond L. Buskirk, as field superintendent. The general manager is Charles Scott, at present on vacation with Mrs. Scott at Denver, where they are visiting their daughters.

Ralph Skinner, of J. H. Skinner & Co., Topeka, Kan., accompanied by his daughter, Elizabeth, drove to Keno, Ore., in July to visit his sister. His nephew, Ralph Skinner, recently out of the service, is now with the firm. Another nephew, Henry, is expected to join them upon his discharge.

L. F. Rosenberger has purchased Livingston's Flower Gardens, Wichita, Kan., from T. Livingston, who is retiring. The name has been changed to the Rosenberger Greenhouse & Nursery. Mr. Rosenberger was formerly an executive with the Coleman Lamp Co., at Wichita.

## KELLY FRUIT TREES

1-yr. Pear

1-yr. Plum and Peach  
Apricot

California Lovell Peach Pits

Write for prices.

**KELLY BROS. NURSERIES, INC.**

Dansville, N. Y.

## NURSERYMEN

We are now booking orders for fall shipment.

2-year Apple;

Also 1-year Apple

1-year Peach

June-bud Peach

1 and 2-year Grape

Privet

Red Raspberry

Black Raspberry

Blackberry

Dewberry

Boysenberry, regular and thornless

Youngberry

Also other items. Write for prices.

**ROLLERS WHOLESALE NURSERY**  
Rogers, Ark.

## SMALL FRUIT PLANTS and VEGETABLE ROOTS

We grow for the wholesale trade only.

**KRIEGER'S WHOLESALE NURSERY**  
BRIDGMAN, MICH.

**WASHINGTON ASPARAGUS ROOTS**

1-yr. and 3-yr.

Raspberries, Red and Black

Grape Cuttings

The above in quantity lots.

**THE PAW PAW NURSERIES**  
Paw Paw, Mich.

## RHUBARB

Chipman's Canada Red

25,000 No. 1. divisions

**BASS NURSERY**  
Chadron, Neb.

## WASHINGTON LANDSCAPE ARCHITECTS ORGANIZE.

Seattle landscape architects have organized as the Washington Society of Landscape Architects in order to work more effectively as a group in furthering better design, encouraging construction and maintenance standards for garden owners and sponsoring other landscape projects.

The immediate aims of the society are to differentiate professionally trained landscape architects from members of other fields of gardening, to maintain high standards of professional practice, to collaborate with the other planning professions and to study collectively all current problems of garden design and community planning.

The association's headquarters will be at Seattle, and the following officers have been elected for the coming year: Cash M. Beardsley, president; Willard E. Morgan, vice-president, and Roberta Wightman, secretary-treasurer. Committee chairmen have been appointed as follows: Noble Hoggson, legislation and publicity; Edwin W. Grohs, architect and engineer representative; Otto E. Holmdahl, nursery liaison representative; Mrs. John Hanley, education and lectures; Linley Janzen, civic improvement, and Robert J. Hansen, membership.

### SAN DIEGO MEETING.

The July meeting of the San Diego chapter of the California Association of Nurserymen was held July 18 with President James officiating.

Preston Hodges, chairman of the picnic committee, gave his report pertaining to plans for the picnic, and after several places were suggested Pepper grove in Balboa park was selected for the July 31 outing. All nurserymen in the San Diego county area were invited. The chapter provided beer, pop, ice cream, coffee and prizes for games.

A letter from Harold Spaulding, who was unable to be present, stated that applications for insurance sent to the Blue Cross had been accepted. Service for this group became effective August 1.

The report of the board of directors' meeting, held July 2, was given by the president. The following changes were recommended to the membership for adoption: Provision should be made for the vice-president to serve as program chairman, as well as substitute for president. A class of membership to be known as affiliate should be provided, permitting employees of member firms to

## SOME ITEMS WE OFFER FOR 1946-1947

### Fruit Trees in Variety

#### Seedlings—Apple, Pear, Shade Trees

Dwarf Fruit Trees	Chestnuts	Espalier Trees
Filberts	Grapes	Walnuts
		Small Fruits

#### Shade and Flowering Trees

Shrubs—Deciduous and Broad-leaved
Conifers
Vines

Catalog ready in September.

Retail catalogs in color available to the trade at cost.

40-page general catalog, 30c.

32-page bulb and rose catalog, 25c.

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EVERGREENS • Propagators & Growers  
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join the chapter, with dues at \$10 a year. The terms of members of the board of directors should be staggered, thereby making sure that at least two members with one year's experience would be serving. Three men will serve for 2-year terms, and two men for 1-year terms. Provision should be made for the collection of dues by the executive secretary of the state association.

In discussing types of meetings, it was agreed that in the future speakers or entertainment will be provided. Preston Hodges was appointed to investigate places satisfactory for holding dinner meetings, and the cost of such. R. Torres was designated to supply entertainment for the August meeting, but dinner plans were held up pending the report from Mr. Hodges.

A nominating committee composed of H. C. Epperson, chairman; Fred Jaggi and Henry Hildabolt was appointed to place in nomination a full slate of officers for 1947.

Walter Andersen gave a report on the San Diego county fair. Although the association display received no award, it was well received and individual awards went to several members of the association. The fair department requests suggestions from all nurserymen on how to improve

If it's **APPLE** or **PEAR**  
**SEEDLINGS** or **Chinese**  
**Elm Seedlings** you want,  
write us.

Dependable growers  
of quality stock.

## WASHINGTON NURSERIES

Toppenish, Wash.

the fair for 1947. A suggestion was made to invite E. Hulick, manager of the county fair, to attend a meeting and confer with the members on this subject.

A. P. Carlton spoke of the national convention of the Begonia Society to be held at Presidio park August 31 to September 1. Only shade plants are to be exhibited. A complete report will be given by Mr. Carlton at the August meeting, and it is hoped that Mrs. Foley, who is in charge of the convention, will be able to be present. A. P. Carlton, Sec'y.

### CALIFORNIA NOTES.

With more than a month to go, the committees appointed for the California Association of Nurserymen's convention, to be held September 23 to 25 at the Hotel Claremont, Berkeley, are nearly finished with the ground-work. Interest in the meeting is high, and a big turnout is expected. Only members and their invited guests, who must be registered before the opening date, may attend the sessions.

Don Lucas, who managed a number of Japanese-owned nurseries during the war years, has purchased the Proietti Greenhouses, San Leandro, primarily a rose range.

A novelty horticultural plant that

is developing into a commercial crop is the jojoba, or bucknut. In the drier areas it is being planted on an acreage basis. A unique liquid wax, useful in varnishes and finishes for fine furniture, is being produced from the fruit, a nut.

Dr. H. S. Fawcett, for the past nineteen years head of the division of plant pathology at the California citrus experiment station, Davis, has been relieved of his administrative duties at his own request, so that he may devote his entire time to research. His successor is Dr. Leo J. Klotz, who has been a member of the staff for several years.

Fertilizer imports for the current month are twenty-five per cent below those of the corresponding period two years ago. Domestic production is at an all-time high, but demand far exceeds supply.

Plant quarantine inspectors at the border inspection stations report the number of automobiles coming into the state has increased 140 per cent over a year ago. All cars coming into the state must have a plant quarantine inspection, in order that injurious insects may be kept out of the state.

It is estimated that about seventy-five per cent of the fertilizer applications to rice fields in the state are made from airplanes. California rice sells at a premium in the Orient, and local supplies are currently exhausted, as California residents are buying all types of packages to send to relatives in China.

The California Cling Peach Association spent \$750,000 on advertising and promotion during the past year. The assessments for the program are collected by the state in a tax arrangement.

Oil sprays are being used in increasing amounts by nurserymen in the state. For many years oil sprays were not recommended by the state agricultural authorities for nursery use. Recent developments in the sprays have been the cause for the change-over.

New varieties of avocado, desirable for both home and commercial production, have been announced by the avocado association. They are Carter cherimoya, which has a large smooth fruit of high quality and is a fairly reliable bearer; May sapote, which has a high-quality fruit weighing seven to twelve ounces, yellow-green in color and containing about twenty-five per cent sugar, and is a reliable bearer throughout the year, and a third variety, as yet unnamed, which is said to be superior to either of the others.

It is reported that ornamental stock

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306 S. E. 12th AVENUE Avery H. Steinmetz PORTLAND, OREGON.

### Quality Stock

Advance sales have depleted our stock to the point where we do not expect to issue a fall catalog as planned.

Our growing season has been most favorable, but the demand far exceeds the supply for this season.

CONIFERS AND BROAD-LEAVED EVERGREENS  
SHADE AND FLOWERING TREES  
FRUIT TREE SEEDLINGS  
FRUIT TREES  
DECIDUOUS SHRUBS  
VINES AND BULBS  
PORTLAND ROSES

*Write for our Catalog*

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FAIRVIEW, OREGON

*Wholesale Only*

### GOOD WESTERN-GROWN NURSERY STOCK

Fruit Tree Seedlings  
Flowering Ornamental Trees  
Shade Trees

Grown right and packed right.  
Combination carloads to Eastern  
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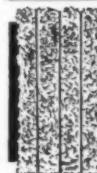
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**Wholesale Growers  
of  
General Nursery Stocks**

1000 Specimen Dwarf Boxwood, 18 to 24 ins.  
500 Green Aucubas, 2 to 3 ft.  
150 Dwarf Alberta Spruce, 2 to 3½ ft.  
50 Juniper Meyeri, 3 to 4 ft.

All stock with perfect fiber roots.

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(Baled Cedar Shavings)

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Growers of  
General Line of  
Nursery Stock.

Oregon and Oregon-Grown  
Apple and Pear Seedlings,  
Angers Quince Rooted  
Cuttings.

Combination Carloads to Eastern distributing points at minimum freight cost.

### AS ALWAYS— OREGON'S BEST SOURCE of GOOD ROSES

Limited crops reserved for  
established customers.

### PETERSON & DERING

*Wholesale Rose Growers*  
Scappoose, Oregon

### NOTICE

Limited production makes it impossible  
to book orders for new customers.

**HOWARD ROSE COMPANY**  
Hemet, California

### BALED SHINGLE TOW (CEDAR SHAVINGS)

**WM. A. JOHNSTON**  
408 Postal Bldg., Portland 4, Ore.

represents seventy-five per cent of all nursery sales in the state and that nurseries sell \$8 worth of garden supplies for each dollar's worth of nursery stock.

The Easter lily plantings in northern California are expected to be worth \$200,000. As an insurance against soil insect injury, nearly every acre of the land used is being fumigated.

Only about one-half as many Mexican nationals were used for farm labor in 1946 as in 1945. During the war years this labor, while expensive, was extensively used.

Almond and peach growers are warned to be on the lookout for an unusually heavy red spider infestation this year. The same species attacks all kinds of nursery stock.

To combat the cherry fruit fly, Washington is destroying 17,500 cherry trees. If funds are available in 1947, about 150,000 prune trees will receive similar treatment. Proper spray schedules would have prevented the loss of these trees, which were neglected in the unprofitable prewar years.

Officials at Golden Gate park, San Francisco, report a greater interest than ever in plant materials for home plantings. The park has weekly displays of easily grown ornamentals, and nurserymen in the area report sales are stimulated by the displays.

The Superior Nurserymen's Association held a monthly meeting August 1.

W. B. B.

#### SHORT COURSE AT SEATTLE.

[Continued from page 17.]

Wieting, of Edison Vocational School. He discussed some of the work carried on in propagating the many kinds of seeds received by the arboretum. Some of the studies in stratification were illustrated by colored slides. Mr. Wieting also discussed and showed slides of work carried on in propagation from cuttings of various plants and propagation of rhododendrons by grafting.

At the end of the first day's session, Paul Brown, superintendent of the arboretum, invited those attending to visit the arboretum grounds that evening. Many nurserymen and landscape gardeners accepted his invitation.

The second day's sessions were opened by Henry Reynolds, commercial bulb grower, Sumner, Wash. Mr. Reynolds has had many years of experience in disease and insect control, both in state regulatory work as well as in commercial orchard and nursery practice. He discussed spraying and the use of spraying equip-



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F.O.B. Pasadena—30 days delivery.

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#### DEL RANCHO FORTUNA FRUIT TREES and GRAPEVINES

P. O. Box 548  
McFARLAND, CAL.

ment. Because of his wide experience, Mr. Reynolds was able to solve many of the problems which were brought up by the nurserymen and growers present.

Plant quarantines and their effect on nurserymen were explained by Howard E. Andrews, head of the state nursery inspection service. As Washington state is relatively new country horticulturally, the area is quite free from most destructive insect pests and diseases. However, in order to maintain this condition, it is necessary to enforce rigidly the quarantine measures. Mr. Andrews climaxed his discussion by pointing out the quarantine covering the growing and distribution of barberry in Washington. Wheat rust is being controlled by the eradication of various barberry plants that serve as winter hosts to the wheat rust spore. A motion picture showing the relation of wheat rust to barberries followed Mr. Andrews' talk.

In the afternoon, Mrs. Frances K. Roberson, widely known grower in the Seattle area, gave an interesting talk on growing and marketing perennials. She built her discussion around a series of questions which confront not only growers of general nursery stock, but growers of perennials as well. One of these questions, how

#### PACIFIC COAST NURSERY

2244 N. Skidmore Ct.  
Portland 11, Oregon

Pioneer Seedling Growers on the Pacific Coast since 1914. Specializing in fruit tree seedlings, Angiers Rooted Quince Cuttings, and Rooted English Privet, Norway Maple, 3 yr., Bra., and E. W. Birch, 3 yr., Bra. We are pretty well sold out for 1946 winter delivery.

#### LETTER

A year ago we sent letters out to all of our customers asking them to send in their orders for 1946 fall delivery so that we would know about how many seeds to plant to take care of our business. About three-fourths of our customers sent in their orders, but one-fourth did not. The ones sending in their orders are protected now. Those that did not send in their orders a year ago are sending in their orders now, but it is too late. It is a disappointment to us when we cannot fill the orders, and it is a disappointment to the customer, and we are afraid some varieties of seedlings are unobtainable at this time.

Dear fellow nurserymen, right now is the time for us to provide for all varieties of seeds to grow the seedlings for fall of 1947 delivery. If you will send in your orders to us now, it will be a help in determining how many seeds to plant to take care of your orders. You will not lose anything by this, because you will not be charged any more than the prices that are set by the seedling growers in the spring of 1948. You know as well as we do that the conditions over the whole world are so unsettled it is hard to know how to plan ahead, but if we can work together, we believe it will help both the seller and the buyer. Thanking you for your favors and with best wishes to every nurseryman, we remain,

Sincerely yours,  
Pacific Coast Nursery,  
By John Holmason & Sons, Prop.

much to grow, was especially well treated. Each grower must analyze his own marketing program. If a nurseryman is growing for the retail trade, he should propagate only as much material as he is reasonably sure of selling. This procedure would reduce the possibility of glutting the market with easily propagated material. Advertising is something that nurserymen should consider more than they do. It is justifiable to consider the cost of advertising as part of the sales price. Good-will adver-

## 1946 Crop California Lovell

Peach  
Pits

Used and recommended by leading nurseries of United States. 4,500 seeds per bushel; uniform, high germination—outstanding vigor and growth. Sacked in good bags.

**ORDER NOW**—All seeds F.O.B. following places. Stephenville, Texas; Tyler, Texas; Amity, Arkansas, or McMinnville, Tennessee. Your order shipped from nearest point.

Sample on request. Terms Cash

No. Bushels	Per Bushel
1 to 5.....	\$3.00
6 to 24.....	2.85
24 to 99.....	2.75
100 bu. and up.....	2.50

Address all orders to Wolfe's Nursery, Stephenville, Texas.

Wire, Phone or Write.

**Wolfe's Nursery**  
STEPHENVILLE, TEXAS

**MYROBALAN SEED**  
**LOVELL PEACH PITS**  
*Nation's Leading Source*  
Write today for quotations.



**California**  
NURSERY COMPANY  
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**Send for Our Seed List.**

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**"Supreme" Quality**

SEEDS — PLANTS — BULBS  
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**AMERICAN BULB CO.**  
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**SEEDS**

Collectors of Tree, Shrub and  
Wild Flower Seeds

Crude Drugs and Ornamentals

E. C. MORAN Stanford, Mont.

tising is one of the most important forms.

The highlight of the afternoon program was a round-table discussion of problems of mutual interest to landscape architects, nurserymen and gardeners. John Grant, Seattle, introduced the subject from a landscape architect's viewpoint. The northwest, as Mr. Grant mentioned, is capable of producing many thousands of kinds of plants which are not now being grown in nurseries. The nurseryman's viewpoint was introduced by O. R. Adams, Richmond Nurseries, Richmond Beach. His answer to the problem was that nurserymen, of course, must conduct their business profitably and frequently must rely on the demands of customers for easily and quickly grown plants. Newer plants such as the landscape architects frequently require take time to propagate. If landscape architects want these superior kinds of plants, it will be necessary to wait some years until stock can be increased.

Thoughts from the landscape architects were presented by John Grant, Otto Holmdahl and E. W. Grohs. Jack Chenoweth, Mount Vernon Nursery, Mount Vernon; B. McGuire, Puget Sound Nursery, Tacoma, and O. R. Adams outlined the viewpoints of the commercial nurserymen. Most of the problems discussed received consideration from both viewpoints. The result was a much better understanding between the two groups and a plan for coordination by their representative organizations.

Following talks by this panel, there was a general discussion of nurserymen's problems from the floor. The need for a public place in which specimen plants could be tested and in which these plants could be studied by landscape architects, their clients and nurserymen was raised. Paul Brown outlined some of the work carried on at his institution. He showed how the arboretum could be of service to nurserymen and landscape architects. Dr. C. D. Schwartze, moderator and chairman of the course, told how the experiment station was willing to cooperate in solving nurserymen's problems. There was a general discussion of the desirability of such a short course as this, and the hope was expressed by many that there would be more in the future.

MR. AND MRS. W. A. LEE, of the Brentwood Berry Gardens, Los Angeles, Cal., are driving to Lake Tahoe, Chambers, Cal., this month for a few weeks' vacation.

**We Offer****RHUBARB SEEDS****New Crop****Myatt's Linnaeus and Victoria**

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A complete line of small fruit plants. Real wholesale prices on **Currants, Red and Black Raspberry Plants, Grapevines, Thornless Boysenberry, Asparagus and Rhubarb Roots, and Nectarine Trees**. Prompt quotation upon receipt of your want list.

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We are in the market for several thousand **Sweet and Sour Cherry Trees**. Also **Fruit Trees and Ornamental Shrubs** of all kinds. Send your surplus list for immediate consideration.

**THE ACKERMAN NURSERIES**

Bridgman, Mich.

**PEACH PITS****1946 Lovell**

	Per bu.
1 to 4 bushels.....	\$3.00
5 to 24 bushels.....	2.85
25 to 99 bushels.....	2.75
100 bushels or over.....	2.50

F.O.B. Cleveland, Tenn., or some point yet to be selected in Texas, Arkansas, Michigan and New York state. In good bags. Terms cash. Order now. Pits are scarce.

Also 1-yr. Apple Graft Whips, 2-yr. Apple, 1-yr. Peach, June-budded Peach, Plum and Apricot. 5-N-1 Apple, Pear, Peach. Combination Fruit Tree, Plum-Peach-Apricot. Send want list for quotations.

**TENNESSEE NURSERY CO.**

Box 1, Cleveland, Tenn.

**PEACH PITS**

THE  
Howard-  
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Company

Hickory, N. C.

**PRONOUNCING DICTIONARY**  
of Plant Names

64 pages, 3000 names, 25¢ per copy  
American Nurseryman Chicago

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Five lines, \$1.00,  
each additional line 20 cents,  
per insertion.

## BERRY PLANTS

## BLUEBERRY PLANTS

Orders being taken for fall 1946 delivery, 6 to 12 ins., well rooted. Cabot, Rancocas, Jersey, Rubel, Concord. \$25.00 per 100, \$225.00 per 1000. Quotations on other sizes on request.

JOSEPH G. O'NEILL  
P. O. Box 32 Moorestown, N. J.

## BULBS

## WHOLESALE PRICES OF CANNA BULBS.

\$6.00 per 100, \$50.00 per 1000  
Hungaria, tall, pink; Wyoming, yellow;  
King Humbert, red; Yellow King Humbert,  
yellow; President, red; Pennsylvania, orange  
and red.

FALL WHOLESALE PRICE LIST  
ON HOLLAND BULBS

DARWIN TULIPS, 11 to 12 cm., \$5.00 per 100  
Bleu Aimable, violet-blue  
William Pitt, red

La Tulipe Noire, brownish-black

Helen Eakin, white

Dresden China, light rose

Rose Copland, bright rose-pink

Sunkist, yellow

Pride of Haarlem, red

Mascotte, salmon-orange

Afterglow, apricot and orange

Bartington, red

Yellow Giant, yellow

William Copland, lavender

HYACINTHS, 16 to 17 cm., \$12.50 per 100

Grenade, pink

Linnea, white

Biancetta, blue

City of Haarlem, yellow and orange

King of the Violets, purple

CROCUS, \$2.00 per 100

King of the Blues, blue

King of the Whites, white

Golden Yellow, yellow

Striped Beauty, blue and white

BENTON COUNTY NURSERY CO.

Rogers, Ark.

## DAY LILIES

Hemerocallis Kwanpo Florepleno. The only double Day Lily known. Prize winner Royal Horticulture Society. Large, double, rich golden-bronze flowers in July and August. \$15.00 per 100.

## IRIS KAEMPFERI

The modern orchid of the gardens. The greatest gift of the Orient to the American gardeners. Field-grown plants from divisions of choice varieties in mixed colors. Order now for early fall planting. \$15.00 per 100. Cash with order, please.

## BROOKFIELD GARDENS

Rt. 6, Delaware, N. J.

The three most reliable fall-blooming Iris, almost everblooming in most sections. Blooms 5 to 6 months out of the year for us. 15-inch stems. Autumn Queen, white; Jean Siret, yellow-flecked blue; Lieut. Chavagnac, dark violet; Fragrant, \$2.00 per 10; \$15.00 per 100; \$100.00 per 1000.

## THE HARRIS GARDENS, Enterprise, Kans.

CANNAS—Select stock, 200,000 President, rich scarlet, 4 ft. green foliage, carefully grown under our personal supervision, guaranteed true to name. Strong, 2 to 5-eye divisions, liberally graded. \$8.00 per 100, \$60.00 per 1000.

MRS. CHARLIE ROBINSON, Greenville, Ga.

## DOUBLE TIGER LILY BULBS

Per 100  
3 to 4-in. circumference..... \$ 6.50  
4 to 5-in. circumference..... 8.50  
5 to 6-in. circumference..... 10.00  
6 to 7-in. circumference..... 15.00

THE EVERGREEN NURSERIES, Lowell, Ind.

## BLACKBERRY LILIES

(Belamcanda Chinensis)

Rare and beautiful, rich orange blossoms, followed by berries. \$2.00 per doz. \$10.00 per 100.

MRS. CHARLIE ROBINSON, Greenville, Ga.

## HEMEROCALLIS

Rajah, Mikado, Geo. V, Imperator, J. A. Crawford, Mrs. Wyman. Sept. delivery. 10 for \$2.00; 25 or more at 15c each.

## ELWOOD GARDENS

5408 Harrison, Kansas City 4, Mo.

DAFFODILS, large hardy, well balanced mixture of Golden Spur, Orange Phoenix, Von Sion, Tenby Obvaldars, White Lady, Jonquil, Orange Queen, Georgia-grown. \$25.00 per 1000, F.O.B. MRS. RUTH GABLE, Harrison, Ga.

If you don't find what you want  
try a Classified Ad  
under the heading "Wanted."

It's cheaper than mailing out a want list.

## EVERGREENS

	Per 100	Per 1000
1000 Am. Arborvitae, 12 to 15 ins. X	\$16.00	\$125.00
500 Can. Hemlocks, 6 to 10 ins. X	11.00	...
300 Can. Hemlocks, 8 to 12 ins. X	15.00	...
250 Can. Hemlocks, 12 to 15 ins. X	25.00	...
100 Am. Holly, 1 1/2 to 2 ft. XX. Br.	35.00	...
2000 Andorra Junipers, 6 to 10 ins. rooted etas.	11.00	95.00
1000 Andorra Junipers, 8 to 10 ins. X	12.50	115.00
Good quality; free packing; shipped prepaid. 3000 Evergreens in B&B. Assorted varieties.		

WHERRY'S NURSERIES, St. Marys, W. Va.

## ROOTED EVERGREEN CUTTINGS

Well rooted. September delivery. Per 100

Chamaecyparis laws. allumi.	\$ 8.00
Chamaecyparis laws. azuera (new).	
An extremely blue allumi.	12.00
Chamaecyparis laws. fletcheri	10.00
Cunninghamia lanceolata (Chinese Fir)	15.00
Cotoneaster parneyi	12.00
Juniperus comm. hibernica fastigiata.	8.00

Cuttings were planted in early spring 1946 and left in sand in an open shaded frame all summer. 25 at 100 rate; minimum order \$4.00.

MITSCH NURSERY  
1235 Franklin St. Lebanon, Ore.

## 20000 BUXUS SUFFRUTICOSA

Most beautiful, true, old-fashioned, dwarf, heavy, round, compact, perfect shaped tops, carefully grown under our personal supervision; 8 years; 10 to 12-in. plants. \$50.00 per 100; 35c in lots of 1000 or more.

MRS. CHARLIE ROBINSON, Greenville, Ga.

## HARDY LINERS

	Per 100
Canada Hemlock, 6 to 9 ins. 2 tr.	\$20.00
Canada Hemlock, 9 to 12 ins. 2 tr.	25.00
Zanthorrhiza apifolia, rooted layers...	5.00

CHAS. H. WILLIAMS NURSERIES

Box 223, Exeter, N. H.

## SPECIMEN TAXUS

See my Ad in this issue for some beautiful specimen Taxus. Also write or call about other specimen Magnolias, etc. Westbury 323, JOHN VERMEULEN, Westbury, L. I., N. Y.

VINCA MINOR (Myrtle), 6 to 9 ins., field-grown, ready for landscaping. \$10.00 per 100 clumps. State and federal inspection.

SYLVANIA NURSERY & PEAT CO.,  
New Galilee, Pa.

Write for new Pine and Spruce seedling and transplant price list. Order now for fall and spring.

SAM E. DIBLE, CIBC Nursery Agent, Shelocta, Pa.

Buxus. Suffruticosa, 8 to 10 ins., bushy, stout, bed plants, \$10.00 per 100.

MRS. CHARLIE ROBINSON, Greenville, Ga.

## Surplus Stock

can be easily and quickly turned into  
Cash  
listing it in the  
American Nurseryman Classified Ads.

## GRASS SODS

We again solicit, after four years' absence, your GRASS SODDING contracts. No job too large or too small for us to handle.

ABOTT'S GARDEN SERVICE  
Box 208, Flushing, N. Y.

## HARDY PLANTS

PRIMULA POLYANTHUS—WESTERN GIANT STRAIN

Clean, new crop seeds of this wonderful strain of giant, hardy primroses. Heavy, erect trusses of blooms and fine range of brilliant colors commend this strain to the most discriminating growers. Plants of this strain brought \$2.50 per dozen wholesale on the Portland market this spring. Many retailed up to 50c per clump. Seeds generous in packet, \$1.00 postpaid. Full % oz., \$2.00. New booking orders for seedling plants, September delivery, \$2.00 per 100. Minimum order 250.

WESTERN HORTICULTURAL SUPPLY CO.  
3629 S. E. 67th Ave. Portland 6, Ore.

## PERENNIAL VERBENAS.

Rich scarlet, Snow, pink and lavender. Large field plants. \$4.00 per 100, \$25.00 per 1000.

MRS. CHARLIE ROBINSON, Greenville, Ga.

## VIOLETS.

Sweet-scented blue, hardy, heavy bloomers; large plants. \$3.00 per 100, \$25.00 per 1000. MRS. CHARLIE ROBINSON, Greenville, Ga.

## ROOTS

PERENNIAL MULTIPLIER ONIONS  
Top Sets  
10 lbs., \$2.50; 100 lbs., \$22.50  
THE EVERGREEN NURSERIES  
Lowell, Indiana

## SEEDS

Booking orders for following seeds freshly collected from tree to you. Per lb.  
Cornus Florida..... \$0.50  
Magnolia Glauca..... 1.50  
Ilex Opaca..... .00  
Ilex Verticillata..... .50  
Ilex Glabra..... .50  
Aronia Arbutifolia..... .50  
Aronia Melanocarpa..... .50  
WM. J. WRIGHT, R. D. 1, Bridgeton, N. J.

PEACH PITTS, southern collected, high germination, \$3.00 per bu. Peach, Plum, Apricot, fall delivery; 1-ft. 20c; 2-ft. 30c; 3-ft. 40c; 4-ft. 60c; 5-ft. 70c; 6-ft. 80c. Cash with order.

RIVERDALE NURSERIES, Riverdale, Ga.

## SHRUBS and TREES

HOLLAND-GROWN Azaleas, Rhododendrons, Junipers, Taxus, Tulips, Lilacs, Magnolias, Peppermint, Pyrethrum, Dicentras, Lilliums and a good list of useful nursery items, subject to the Netherland's government regulated prices. JOHN VAN DER POL, Boskoop, Holland, represented by VAN DER POL'S NURSERY, M. Van Der Pol, owner. Fairhaven, Mass.

15,000 CHINESE ELM, 4 to 9 ft., straight, but trimm'd. 2000 Chinese Elm, 2-inch to 5/8-inch caliper, 16 to 18 ft. straight.

100 Hackberry, Thornless, London, and Ash trees, 10 to 12 ft., straight, by the 100 or carload for this fall or next spring. Place your order now.

GRAND ISLAND NURSERY,  
Grand Island, Neb.

## ROSE SEEDLINGS.

Multiflora Japonica understock, 1 year old, extra heavy, well rooted; large enough to be budded. \$125.00 per 1000, F.O.B.

SOUTHLAND ROSE NURSERIES,  
Tyler, Tex.

Blight-resistant Chinese Chestnut Trees, excellent strain, well rooted, good caliper, 3 to 4 ft., \$65.00 per 100, 2 to 3 ft., \$50.00 per 100.

A. TOMS NURSERY, Fort Deposit, Md.

## VINES

## HALL'S HONEYSUCKLE

(Lonicera Halliana Japonica)

Strong N. Y. 2-year, field-grown, 3 to 4 leads, 18 to 20 ins.; carefully graded, selected plants. \$4.00 per 100, \$30.00 per 1000; lighter plants, \$20.00 per 1000. Immediate shipment. MRS. CHARLIE ROBINSON, Greenville, Ga.

## MISCELLANEOUS

Wholesale prices for 1-year, No. 1 GRAPES  
Per 100 Per 1000 Per 10,000

Concord..... \$10.00 \$ 20.00 \$ 800.00

Fredonia..... 11.00 100.00 900.00

Moore's Early..... 11.00 100.00 900.00

Campbell's Early..... 11.00 100.00 900.00

Delaware..... 12.00 110.00 1,000.00

Niagara..... 11.00 100.00 900.00

CALIFORNIA PEACH SEEDS

California Lovell Peach Pits from 1946 crop. Well cared for in drying. In bags of about 50 lbs. Each \$3.00 per bushel. In lots of ten and up, \$2.50 per bushel. F.O.B. Rogers, Ark.

BENTON COUNTY NURSERY CO., INC.  
Rogers, Ark.

DELPHINIUM, Improved Gold Medal Hybrids, 2-yr-old, field-grown, long fibrous roots, \$7.50 per 100; \$4.00 per 50.

RHUBARB SEEDS, Victory, Strawberry and Mammoth mixed, 55c per lb. Divisions, No. 1, at 5c. Cash with order.

SWEDBURG NURSERY  
Battle Lake, Minn.

## SUPPLIES

A. F. S. "EASI-OFF" WOOD PLANT BANDS  
Size 1 in. Weight per 1000 Per 1000

1 1/2 x 1 1/2 x 2 1/2, 12 lbs..... \$3.35

2 1/2 x 2 1/2 x 3, 15 lbs..... 3.60

2 1/2 x 2 1/2 x 3, 20 lbs..... 4.20

3 1/2 x 3, 21 lbs..... 4.60

3 1/2 x 4, 32 lbs..... 5.30

4x4x4, 40 lbs..... 6.30

Packed 100 to the carton.

We do not break the cartons.

LIGHT WOOD FLATS.

For handling and shipping our 1 1/4-in. and 2-inch sizes of Plant Bands. Per 100

M-370; holds twelve 1 1/4-in. Bands..... \$2.75

M-390; holds twelve 2-inch Bands..... 2.30

M-392; holds twelve 2 1/2-in. Bands..... 3.55

M-394; holds six 4-inch Bands..... 3.95

Packed 100 to the carton. We do not break cartons. Shipped promptly from the factory in Michigan.

AMERICAN FLORIST CO. Chicago 7, Ill.

MAGIC ELECTRIC WELDER, 110-volt AC-DC; welds, brazes, solders, cuts all metals easy to use; full directions. Complete with power units, flame, and metallic arc attachments, carbon, duplex rods, mask. Only \$19.95. Used by the Navy. Guaranteed one year.

MAGIC WELDER MFG. CO.

241NA Canal St., New York, N. Y.

## CANE STAKES

## FOR POT PLANT GROWERS

Now is the time to get the best DOMESTIC CANE STAKES. All dark green. Check this list now and send your order.

## HYACINTH STAKES, THIN.

Per 1000  
12 ins. \$6.50  
16 ins. 6.25  
18 ins. 7.15

## STANDARD PENCIL THICKNESS.

1 ft.	5.50
1 1/2 ft.	7.15
2 ft.	8.95
2 1/2 ft.	11.75
3 ft.	13.15
3 1/2 ft.	14.30
4 ft.	16.95

(Can also furnish 5 and 6 ft.

Write for prices.)

## MEDIUM, HEAVY.

% to 1/2 in. (\$00 to bale.)

2 ft.	10.50
2 1/2 ft.	12.50
3 ft.	15.00
3 1/2 ft.	16.00
4 ft.	17.50
5 ft.	20.70
6 ft.	25.00

## HEAVY TONKIN.

1/2-inch and up.

Per 1000

2 1/2 ft.	\$3.00
4 ft.	3.50
5 ft.	4.80
6 ft.	6.30
7 ft.	6.95
ft.	6.60

## AMERICAN FLORIST SUPPLY CO.

1335 W. Randolph St. Chicago 7, Ill.

## STAKES—Bamboo

Carefully Selected—Dyed Dark Green.

## Uniform Pencil Thickness.

No. G-31	2 ft.	Bale of 2000	\$10.95
No. G-32	2 1/2 ft.	Bale of 2000	13.90
No. G-33	3 ft.	Bale of 2000	16.65
No. G-34	3 1/2 ft.	Bale of 2000	19.45
No. G-35	4 ft.	Bale of 2000	23.35

## TONKIN STAKES—Bamboo

Dyed Green, medium, Heavy.

No. G-41	3 ft.	Bale of 1000	\$ 9.85
No. G-42	3 1/2 ft.	Bale of 500	7.75
No. G-43	4 ft.	Bale of 500	8.70
No. G-44	5 ft.	Bale of 500	11.95
No. G-45	6 ft.	Bale of 500	13.75
No. G-46	7 ft.	Bale of 200	7.70

We cannot break bales.

Quantity discounts, 10 to 24 Bales, 5 per cent.

25 Bales or more, 7 1/2 per cent.

## SCHUPP SUPPLY CO., Wilmette, Ill.

## KNOCK-DOWN FLATS.

Made from a good grade of Southern Yellow Pine, since Cypress is not available. Standard specifications, inside measurements.

16x12x2 1/2	.....	\$16.25 per 100
16x14x3 1/2	.....	20.25 per 100
20x14x2 1/2	.....	20.00 per 100
20x14x3 1/2	.....	23.00 per 100
22 1/2x15x2 1/2	.....	22.00 per 100
22 1/2x15x3 1/2	.....	25.00 per 100

All other sizes quoted on request. Prices F.O.B. Birmingham.

We are manufacturers, not jobbers. Freight to any point is a small item per flat. Our flats are the best. Why pay more? Our quality guaranteed. Prompt shipment, any quantity. Attach check to order.

## HIGHTOWER BOX &amp; TANK CO.

Birmingham, Ala.

## FINE NO. 1 OR NO. 2 SCREENED PEAT.

Acid pH 4-8. Some nitrogen. Our Peat is excellent for Azaleas and Hydrangeas, also for mixing with soil for potting and seed flats. This Peat is very good for mulching Mum beds and mixing with soil for Snapdragons seed. Order early. Packed in 2-bu. bags, 5 to 24 bags, \$1.00 each; 25 to 49 bags, 95c each; 50 to 100 bags, 90c each. Bulk carload, about 60 yards or 600 bags, \$27.50 per car. We ship same day order received. Cash, please.

## HAASE BROS.,

116 S. Jefferson St., Peoria, Ill.

## IMPORTED CANE STAKES

Check your needs and order now.

Size	Per 1000
15 ins.	\$3.50
18 ins.	4.10
24 ins.	6.40
30 ins.	6.90
36 ins.	8.30
48 ins.	10.75

## 2000 per bundle

AMERICAN BULB CO.

1335 W. Randolph St. Chicago 7, Ill.

## CYPRESS PLANT STAKES.

Unpainted, 6 feet long, not exactly square. Suitable for Dahlias, small trees and other heavy stems.

Averaging 1/2 to 1 inch in width. \$60.00 per 1000. F.O.B. New York. Minimum order, 250 stakes. Less 5 per cent quantity discount on 5,000 up.

## McHUTCHISON &amp; CO.

55 Chambers Street New York 7, N. Y.

## SOIL HEATING EQUIPMENT

designed by a power and engineer, for commercial propagation. Cable, soil thermostat and pilot lamp to heat 20 sq. ft., \$11.40; 40 sq. ft., \$14.25; 60 sq. ft., \$17.10; 80 sq. ft., \$19.95; and 100 sq. ft., \$27.05. F.O.B. Seattle.

L. N. ROBERSON CO.

1539 E. 103rd St. Seattle 55, Wash.

## PROFIT WITH PERF-O-RAIN.

Rain when you want it—low pressure—rectangular strip watered—No overlap—No sprinkler heads or other gadgets—Portable lightweight pipe—Long life. Write for free folder. W. R. AMES COMPANY OF FLORIDA, 3905 E. Broadway, Tampa 5, Florida, or W. R. AMES COMPANY, 160 Hooper St., San Francisco 7, Calif.

## TREE DIGGERS.

For digging nursery-row-grown fruit and shade trees, shrubs, vines, hedge plants, rosebushes and ornamentals. Manufactured to be drawn by either horses or tractors. Further particulars upon request.

WILSON & SONS NURSERY CO. Winnsboro, Texas.

RUBBER. Your Rubber requirements are important. Know where to get it when you want it. Belts, rubber bands, boots, coats, gloves, hose, spray bulbs, aprons, budding strips. Get our price sheet and catalog today. BROADWAY RUBBER MFG. CO. Louisville 2, Ky.

## SPECIAL AUGUST SALE

Sphagnum moss, long fibered in standard burlap bales at \$1.55. Milled sphagnum moss for control of damping off in seed flats, etc. at \$1.55 per bag. F.O.B. Floodwood, Minn. COLBY PIONEER PEAT CO., INC. Hanlonontown, Ia.

## SPHAGNUM MOSS

Clean, long-fibered burlapped bales, 14x15x 45 ins. Carload lots, \$1.50. F.O.B. Warrens, Wis. Same moss in wired bales at \$1.25. WARRENS MOSS CO. Box 7, Warrens, Wis.

## PRINTING

Letterheads, billheads, statements, cards, envelopes, tags, blotters, folders, catalogs, samples. Send copy for estimate. J. GARLAND HILL, Dept. A, Seaford, Del.

SOIL HEATING CABLE by "GRO-QUICK." Heavy duty cable now available, also thermo. Bottom heat can't be beat for rooting cuttings, for forcing. Get free instal. date. GRO-QUICK, 366 W. Huron St., Chicago 10, Ill.

GIBRALTAR Frost Covers pay for themselves. Economical, long-lasting, ideal for windbreaks, 6 ft. wide; 50 ft. \$13.75; 100 ft. \$26.00; 150 ft. \$39.00. NEW AMSTERDAM IMPORT, 122 Chambers St., New York 7, N. Y.

COTTONNETTE Squares are best for balling. Saves time and twine. All sizes in stock. Write NEW AMSTERDAM IMPORT 122 Chambers St., New York 7, N. Y.

If you don't find what you want try a Classified Ad under the heading "Wanted." It's cheaper than mailing out a want list.

## WANTED

WANTED to buy for Autumn and Winter delivery, all varieties of rooted cuttings, lining out stock and finished ornamentals. Would appreciate your list or catalog.

GRIMSHAW NURSERY 1020 Dublin Blvd. Hayward, Cal.

## WANTED

Pink Dogwood, Red Maple, Redbud, Fringe Tree, Lilac, Weeping Willow, Shrubs. 5 to 20 years old.

ARTHUR V. LEY LaPlata, Md.

WANTED — Colorado Spruces, blue and green, to be cut for Christmas trees, size 2 to 10 feet, need about 500. State price in ground or delivered. JOHN HOVERMAN & SONS, INC., State Hwy. Rt. 17, Rochelle Park, N. J.

Surplus Stock can be easily and quickly turned into Cash listing it in the American Nurseryman Classified Ads

H. C. KRUEGER, recently released by the navy, is now manager of the West Adams Nurseries, Los Angeles, Cal.

THE new address of Granville Olson, Alpine Meadows Nursery, is 3201 Linger lane, Salt Lake City. He was formerly located at 1210 Laird avenue.

BENJAMIN F. POTTS has established the Beacon Perennial Nursery at Birdsboro, Pa. Mr. Potts is a World War II veteran with four years' service.

America finds  
a new, easy  
way to save



Out of the war has come a great lesson in thrifit—the success of the Payroll Savings Plan.

Under this Plan, during the war, millions of wage earners set aside billions of dollars for War Bonds through "painless" weekly pay deductions.

Under it today, millions more continue to use its easy deductions to buy U. S. Savings Bonds... to put away the money for new homes, new cars, new appliances.

**SUGGESTION:** Why not let this new, easy way to save help you save too?

**SAVE THE EASY WAY...**

**BUY YOUR BONDS**

**THROUGH PAYROLL SAVINGS**

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**NOTES FROM A  
NURSERYMAN'S WIFE.**

[Concluded from Page 31.]

can still see a tree growing from a tower, for a 15-foot aspen sapling is growing on another corner.

\* \* \*

1945 marked the diamond jubilee of the Elberta peach (Is it a losing fight to continue to spell the name with an "E" or should we call it "Alberta" along with nine-tenths of the rest of the world?) and the golden jubilee of the Delicious apple. In 1870 a Chinese cling peach was planted at Marshallville, Ga., from which has come the Elberta, which many nurserymen's wives are peeling and canning and freezing right now. Jesse Hiatt, of Madison county, Iowa, found in 1895 the original tree from which the modern Delicious apple has sprung.

\* \* \*

One of these hot days when conversation lags see how many plants named from animals can be thought of. Dandelion, dog's-tooth violet, squirrel corn, elephant's-ear, foxtail, horse chestnut, harebell, buckthorn, cowslip, cattail, snapdragon, buckwheat—go on from there. Then start on those named for insects and reptiles: Butterfly bush, spiderwort, fleabane, chiggerweed, Venus's-flytrap—and many more.

\* \* \*

"A good soil, like good food, must not be either too fat, or heavy, or cold, or wet, or dry, or greasy, or hard, or gritty, or raw; it ought to be like bread, like gingerbread, like a cake, like leavened dough; it should crumble, but not break into lumps; under the spade it ought to crack, but not squelch; it must not make slabs, or blocks, or honeycombs, or dumplings; but when you turn it over with a full spade, it ought to breathe with pleasure and fall into a fine and puffy tilth." Karel Capek in "The Gardener's Year."

\* \* \*

Agriculture is a tie that binds us into one world. Years ago we read in the Literary Digest that one Charles Collier, a special assistant to the director of the United States Soil Conservation Service, was making a 4,500-mile journey through Chile, Bolivia and Peru armed with camera, notebook and interpreter. His purpose was to glean some of the accumulated lore of the Incas, who worked steep hillside farms for more than 1,000 years and left the soil as productive as ever. We have

**WANT ADS**

Help and Situation Wanted and For Sale advertisements.

Display: \$2.50 per inch, each insertion. Liners: 20¢ line; minimum order \$1.00

**FOR SALE**

Old established cash-and-carry nursery. Located near three large cities.

Modern buildings and equipment. Modern house, storehouse, large warehouse, greenhouse. Three acres of well filled perennials and nursery stock.

Property must be seen to be appreciated. Price, \$25,000.00.

Address Box 458, care of American Nurseryman.

**FOR SALE**

Well established floral and greenhouse business, with good retail and wholesale trade, located in closely populated section of the city. Four greenhouses totaling 7,000 sq. ft., with office, display room, workroom, pot room, soil room, storage and tool sheds, coldframes and lath house. Oil, hot-water, thermostatically controlled heat. \$3,000.00 worth of stock, including stock of polynesian geraniums, celias, English lilies, fuchsias, etc.; bench crops all in.

Good 7-room modern house, with oil, hot-water heat, hardwood floors, fireplace and full concrete basement.

Total price \$23,000.00.

SELLWOOD  
FLORAL & GREENHOUSES  
1627 S.E. Nehalem St. Portland 2, Ore.

**HELP WANTED**

Working foreman, for well established southern nursery and landscape firm, who knows plant materials and can handle men, plant, prune and do general landscape work from small landscape plans. Permanent year-around work. Give age, experience, references and minimum pay required. Address Box 456, care of American Nurseryman.

**FOR SALE**

Nursery in New England specializing in evergreen lining-out stock, operated successfully 12 years as a mail-order nursery. Well stocked with many scarce items. Priced very reasonably. No encumbrance. Address box 457, care of American Nurseryman.

**HELP WANTED**

Young man for assistant propagator on wholesale nursery stock, specializing in grafted hybrid Rhododendrons, Taxus, grafted Junipers, Azaleas, etc. Permanent position.

KOSTER NURSERY  
Bridgeton, N. J.

**FOR SALE**

Myers Power Spray outfit, skid-mounted, 200-gal. tank; 6-horsepower engine. In good running condition. Write: STEWART H. WILLSON, 1087 Enfield Street, Thompsonville, Conn.

**HELP WANTED**

Experienced nursery and landscape salesman; also a seed store manager; house in nursery furnished.

MALMO NURSERIES & SEED STORES  
Seattle 5, Wash.

heard nothing of Mr. Collier since, but it is pleasant to think that he may have brought back ideas on terracing, contour plowing, etc., from the empire of these Indians whose big-kerneled grass called "teocintl" has become our corn, grown in every state in the Union.

\* \* \*

Asia has contributed to our agriculture, too, as well as to the more abstract fields of religion, philosophy and art. We have fruits from the Near East, vegetables from the Hindu Kush region, zebu cattle from India, the horse from Arabia, tung oil and soybeans from China. If meat prices soar out of sight we can get our proteins from soy beans, they tell us, as Buddhist monks have for more than 2,000 years.

**LANDSCAPE FOREMAN**

Old established landscape concern in prosperous city in Michigan wants landscape foreman. State age, experience, wages desired in first letter. Address Box 455, care of American Nurseryman.

**HELP WANTED**—Apprentice to learn propagation and growing of lining-out stock and management of propagation nursery. Prefer some experience or/and horticultural schooling. If veteran, will train under G.I. bill benefits plus small apprentice wage. Teacher born in Boskoop, Holland, nursery center of the world. Nursery on Long Island, N. Y. Address Box 453, care of American Nurseryman.

**FOR SALE**—Entire nursery business, wholesale and retail, complete with about 25 acres of stock, total about 100 acres. One house, tools, tractors, barn, greenhouse, etc.

PETER J. BOOY NURSERIES,  
Mendham, N. J.

Phone: Mendham 3-0248

**NURSERY WANTED**—An associate of mine is in the market for a nursery or greenhouse in the southeastern states, or on Gulf coast of Texas or in California. Total investment not over \$40,000.00.

CLINT McDADE, Box 831, Chattanooga, Tenn.



height of one to three feet, depending on soil fertility, moisture and exposure, and its ample panicles of small white flowers are delightful in border and bouquet because of the airy, softening influence of its baby's breath-like flowers. Growing naturally on rocky banks and shores throughout the northern states, *G. boreale* is to be approached with the confidence that it will not disappoint one in its reaction to garden conditions, for it grows readily in any well drained soil in sun or part shade. Incidentally, if you grow cut flowers for sale, you will find its flowers readily usable in the same roles as baby's breath. Because it spreads freely in congenial surroundings by stolons, it should not be planted near delicate plants.

Two European bedstraws, *G. rubrum* and *G. verum*, will also be found valuable garden plants. The first, with reddish flowers on 6-inch stems in summer, is a good little ornament for sunny or lightly shaded spots in the rock garden or wall. The other, with yellow flowers on 15-inch wands on stems of varying heights, is not only a good garden plant, but also will be found of value as a summer cut flower, especially for use in flower arrangements. As it grows here in light soil under crowded border conditions, it seldom exceeds eighteen inches or two feet, but I have seen it twice that tall. It is fragrant, and all types are easily grown from seeds, divisions or cuttings.

#### Galega.

We gardeners are likely to forget what those who preceded us accomplished to make our lives easier and our gardens more fruitful and beautiful. We came upon the scene with plants from the four corners of the world ready to use, brought to us through the sufferings and hardships of numberless explorers, and with instructions for their culture and use which have been wrung from nature by gardeners of a bygone day, not by merely asking, but by backbreaking efforts and heartbreaking trials.

These thoughts came to me when I reread Mrs. Earle's account in "More Potpourri from a Surrey Garden" of a plant association which I enjoyed in one of my first gardens and which I hope to repeat as soon as convenient.

"When I planted the *Ornithogalum pyramidal*," she wrote, "in September of last year, I planted between them some pieces of *Galega officinalis*, so easily divided in autumn. The fresh bright green makes a ground-work for the long spikes of the bulbs, and later it gives a succession of flow-

## A MECHANICAL CAN CUTTER



- 1—Saves money.
- 2—Saves time.
- 3—Quick adjustment to fit 1, 3 or 5-gallon cans.
- 4—Cuts 4 drain holes in sides at bottom rim (not in bottom) in one easy stroke.
- 5—Case-hardened blades for longer wear.
- 6—Replaceable parts.
- 7—Assembled, ready for use.
- 8—Shipping weight 45 pounds.
- 9—AVAILABLE FOR IMMEDIATE DELIVERY.
- 10—Price F.O.B. Nursery, \$38.50. Cash with order please.

### VERHALEN NURSERY COMPANY

1114 South Beckley  
Dallas, Texas

Scottsville, Texas

## SPRAY CHEMICALS AND APPLICATION EQUIPMENT

A Handbook of the Insecticide-Fungicide Industry and Chemical Application Equipment

By J. A. McClintock and Wayne B. Fisher

Part one gives the interesting historical background of many chemicals and tells how they are manufactured. Describes methods of using spray chemicals, discusses insects and diseases controlled by the specific chemicals and relates methods of improving present pest control practices.

Part two describes almost every type of sprayer and duster available to the public for use in applying spray chemicals. About 300 illustrations are included in this section, and all types of equipment are shown, ranging from the simplest atomizer sprayer to the largest commercial equipment.

Large page size, 8 1/2 x 11 inches. More than 300 pages, over 500 illustrations. Bound in maroon cloth.

Price, \$4.00 per copy

For sale by

**AMERICAN NURSERYMAN**  
343 S. Dearborn St., Chicago 4, Ill.

### "GRO-QUICK" ELECTRIC SEED BED HEATER

**BOTTOM HEAT CAN'T BE BEAT**  
For early plant starting with high germination and fast growth. Invaluable for rooting cuttings. Soil heating cable and thermostat for plant benches and coldframes. Detailed instruction sheet mailed free.  
*GRO-QUICK*, 306 W. Huron St., CHICAGO, 10.



### MICHIGAN PEAT

*Nature's Finest Soil Builder*

Used by leading growers for 30 years. Rich in nitrogen and plant food. Economical. COSTS LESS TO USE! Packed in 100-lb. bags, averaging 4 bu. Prices F.O.B. Capac, Mich. Each  
1 to 19 bags.....\$1.65  
20 to 99 bags.....1.50  
100 to 400 bags.....1.40  
Bulk cars, \$14.00 per ton.

**American Soil Sponge Selling Corp.**  
267 Fifth Ave.  
New York 16, N. Y.  
Plant Capac, Mich.

ers of its own pretty white or pale lilac." The connection between the first paragraph and this one lies in the fact that I should no doubt have missed this happy association if Mrs. Earle had not set down the pleasure it had given her. I hope I shall always be grateful for what my prede-

cessors have done and my contemporaries are doing for the craft.

But to return to galega, here is a pleasant plant for pleasant gardens, thriving in the hot sun and in almost any garden soil. Its 30-inch stems

## PEAT

Now booking bulk car shipments for 1946 spring and summer delivery of Black cultivated Peat and Moss Peats.

"Quality Peats for all Purposes."

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Give Top Protection to your Nursery Stock.

**ROTIENONE and DDT PRODUCTS**  
In Dusts and Sprays.

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Racine, Wis.

are clothed in pretty legume leaves, and from June until September, in this climate, come compact clusters of lilac-purple pea-shaped flowers. The white form, *alba*, is preferred by many because it combines so well with other colors of its season, and variety *hartlandi*, with flowers of variegated white and lavender, is especially striking. The type comes readily from seeds, and all, as Mrs. Earle said, are easily divided in early spring or autumn.

## FREIGHT CARRIERS.

While other modes of freight transportation receive considerable public notice, the railroads continue to carry two-thirds of all intercity traffic, showing a gain during the war. In 1941 the railroads' share of all freight business was 63.6 per cent. In 1945 the rails carried 68.6 per cent of all freight.

Inland waterways, including carriers on the Great lakes, ranked second to the railroads in 1945, hauling 13.6 per cent of the total volume of freight. Pipe lines accounted for 12.5 per cent of total business. Highway carriers hauled five per cent of the total. Airways accounted for one-tenth of one per cent.

Comparison of 1941 and 1945 figures is interesting. The rails have a gain of 5.2 per cent. Pipe lines have a gain of 2.2 per cent. Airways have a gain amounting to a fraction of a tenth of one per cent. Waterways have a five per cent loss. Trucks have a loss of 2.5 per cent—the latter being due in large measure to curtailment of highway transport by rubber and gasoline shortages.

## SUMAC FOR TANNING.

Sumac of American species that now grow wild can provide good tanning material, but commercial tests at the eastern regional research laboratory, near Philadelphia, Pa., indicate that it is not the equal of sumac leaves imported from Italy. The United States Department of Agriculture is interested in sumac as a crop because it is excellent for the control of soil erosion and could be planted widely to return a profit from land now eroding.

Sumac is one of the special-purpose tanning materials. It does not produce a firm, heavy leather, as for soles, but is desirable in making light-colored, soft, flexible leathers. In Sicily a species of sumac, *Rhus coriaria*, is cultivated and the powdered leaves are sold to American tanners. During the war this material could not be imported, and so tanners were

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3 oz. can . . . 25c—packed 36 to case—wt. 12 lbs.

7 oz. can . . . 50c—packed 24 to case—wt. 14 lbs.

1 lb. can . . . \$1.00—packed 12 to case—wt. 16 lbs.

10 lb. drum \$—23 lbs. \$13—50 lbs. \$25—100 lbs. \$40

Commercial growers and dealers receive 33-1/3% discount from the above retail prices.

BUY HYPONEX from your jobber or send \$1 for 1 lb. (makes 50 gallons). \$1.00 credit on first order for 1 drum or case.

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ELYRIA, OHIO

Advertising, plant name, color-banded and plain labels. Write for price list.

**MARSHMALL'S OHIO NURSERY**, Elyria, Ohio

forced to substitute less satisfactory materials.

In the tests of three American species, dwarf sumac, *Rhus copallina*, was almost up to the Sicilian standard and slightly better than leaf powders from staghorn sumac, *Rhus typhina*, or white sumac, *Rhus glabra*. All are good soil binders.

According to the U. S. D. A., the domestic sumac was handled as well as the commercially collected sumac under the most favorable circumstances, but even after purification it did not yield a product equal to Sicilian sumac. Apparently the best prospect for obtaining a domestic product equal or superior to Sicilian sumac is in breeding and propagating a variety better than the ordinary wild species.

#### GOOD LABOR RELATIONS.

[Continued from page 11.]

stick our heads in the sand. Therefore, I would like to take a few minutes more and outline some of the responsibilities of management as I see them. We, as directing agent of our business, should first strive for an organization of clearly defined responsibilities and authorities. A good organization links together the objectives to be attained with every activity necessary to accomplish a given purpose. From good organization comes good control. This is the principle of management which demands that it must know what ought to be done in accordance with the declared principles and laws of the organization and what is being done in all divisions and departments of the business. If what is being done differs from what ought to be done, control means knowing why it differs.

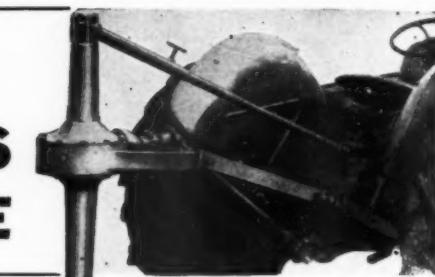
The most vital element of management control is cost control. This is the index of the business, and it is here that profits are made. A cost control system that reports losses is of no practical value, but one that uncovers and prevents losses is profitable. Not only the costs that reveal themselves as items on the ledger are important, but also those which are hidden, such as poor stands, excessive and unnecessary mileage or spoiled stock. Many more items could be listed, but suffice it to say we have leaks which must be plugged.

One of the best methods of overcoming this condition is for management to educate itself and tune itself to the progress being made by other industries. An absolute essential to good management is mutual confidence between the individuals in management and labor. This requires that top management be honest with

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its foremen and supervisors and that they in turn be honest with their men.

One of the results of many years of industrial mismanagement is the attitude of suspicion that many work-

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ingmen and even supervisors have toward the company. This is especially prevalent when there is a change in personnel methods or policy. Employees immediately suspect something detrimental to their well being



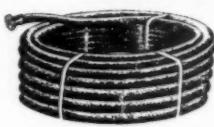
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MENTION THE AMERICAN NURSERYMAN

and are ready to oppose in every manner the new person, method or policy.

There is only one way to do away with these difficulties, and that is to make the best interests of the men identical with the best interests of the company. This may be accomplished by having management take into its confidence all of the personnel in supervisory positions who will be affected by the change. They should be asked to render an opinion or even a criticism of the change, and above all, these opinions and criticisms should be discussed and considered. The aim should not be to sell management's ideas alone, but to give the men an opportunity to sell management on their ideas.

The principle of mutual confidence can be best developed through the medium of well organized foreman and management meetings. I know of one nursery at which management meetings are held at regular intervals and each member of the executive staff has the opportunity to act as chairman. The objects of these meetings are to give each person a chance to get the feel of running a meeting, to observe and direct the other members of the staff in matters pertaining to his department and to develop healthy, sportsmanlike competition through a more intimate knowledge

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### PROTECT TREES AND SHRUBS AGAINST RABBITS

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One application lasts entire season.  
YOUR NURSERYMAN OR SEED  
DEALER HAS IT. Write for detailed  
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of the other fellow's problems and operations.

Most people do not progress because they stop learning. A constant search for knowledge is the first step in progress. To be sure, many of these thoughts have been disclosed

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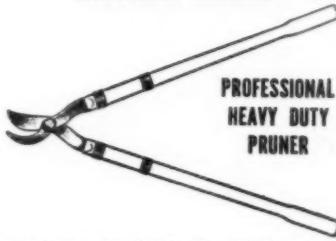


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**TROWELS—Heavy Duty**  
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### DOWAX

★ Extends trans-planting season

★ Reduces losses



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and formulated by such investigators and writers as Taylor Emerson and Knoepfle. They are not new. In fact, they are as old as civilization, but they are new to each incoming generation of managers and have to be rediscovered.

ered, reapplied and presented and interpreted in the language of the newer times.

#### PRUNING SHADE TREES.

[Concluded from page 12.]

branches and inside thinning. It is my opinion, however, that stock transplanted from the woods should have at least fifty per cent of its branch area removed, which would include drastic topping back to side leaders. If this material could be thinned out, topped, etc., and left to grow one season, a much greater degree of success in transplanting would be secured.

In conclusion, I would say that in the majority of early pruning we are always too fainthearted in cutting back our stock. One may be of the opinion that to cut heavily will spoil appearance of any tree. Such is not the case if it is properly done. The third year afterward will produce dividends both in satisfactory stock and in new twig structure.

#### CATALOGS RECEIVED.

Breedlove Nurseries, Tyler, Tex.—Wholesale price list of roses, fruit and ornamental trees, shrubs and broad-leaved evergreens, 2 pages, 8½x14 inches.

Chandler Landscape & Floral Co., Kansas City, Mo.—Wholesale price list of specimen evergreens, deciduous trees and evergreen grafts, 5 pages, 8½x14 inches.

Jewell Nurseries, Inc., Lake City, Minn.—1-page wholesale price list of perennials, 8½x15 inches.

The Homestead Nurseries, Boskoop, Holland—Wholesale price list of ornamental deciduous and evergreen trees and shrubs and hardy herbaceous plants, 12 pages, 9½x12½ inches.

Stark Brothers Nurseries, Louisiana, Mo.—Retail catalog of fruit trees, berry bushes, ornamental trees and shrubs, illustrated in color, 16 pages, 10¾x16½ inches.

Wayside Gardens, Mentor, O.—Retail catalog of bulbs, roses, iris, poppies and shrubs, illustrated, partly in color, 112 pages and cover, 8½x11½ inches.

Carl Salbach, Berkeley, Cal.—Descriptive price list of iris, bulbs and vegetable and flower seeds, illustrated, 24 pages, 8½x11 inches.

B. B. BROWN, formerly buyer of nursery stock and seed for Sears, Roebuck & Co., Chicago, left July 1 to take over the active management of the W. G. Farrier Plant Co., Omaha, Tex., grower and shipper of vegetable plants.

A FERN garden is featured by the newly organized Leatherman's Gardens, 925 Lee avenue, El Monte, Cal. R. G. and Sylvia B. Leatherman, proprietors, intend to specialize in flats of vegetable and ornamental plants, potted plants and dish gardens and also plan to fill mail orders.



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**\$35.00**

F.O.B. K. C. Kansas

## NURSERY HAND TRUCK

Material shortages still limit production. We are grateful for the understanding patience of our many good customers who accepted delayed delivery this Spring. We are continuing to ship as quickly as we can, filling orders in the same order we receive them. We suggest that you order now for your Fall season needs.

#### SPECIFICATIONS

Equipped with Jumbo Balloon Tires and Tubes, 12x4 inches.  
Specially Designed Curved Nose.  
All-steel Construction, electrically welded.  
Weight 55 pounds.  
Over-all Length 63 inches.  
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Tells the how and why of all processes.

More than 600 pictures shown in 350 plates.

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**CHEMICAL WEED KILLER.**

Sodium cyanide, whether applied in solid form to the crowns, in solution sprinkled on the leaves, or poured in the soil around plants or in holes adjacent to them, has been found effective for eradicating undesirable plant growth, according to M. M. McCool, writing in Contributions of the Boyce Thompson Institute. Dandelion and plantain, *Plantago major*, were killed at once, and one application of the chemical destroyed both crab grass and foxtail grass.

It required only three applications of solutions containing three per cent or more of sodium cyanide, each at the rate of 11. per square meter, to kill honeysuckle vines and to prevent the reappearance of quack grass from midsummer until the end of the growing season. Quack grass was killed by one application of ammonium sulphate in solution containing three per cent or more of the salt. Pouring a four per cent or stronger solution into adjacent holes killed European and hedge bindweeds. Drenching aboveground portions was also found effective. Poison ivy growing along roadsides was eradicated by sprinkling on a two per cent or stronger solution of sodium cyanide and by applying a three per cent or greater solution to the roots where the vines had climbed trees or fence posts.

**PIONEER APPLE TREE.**

Reported to be the oldest apple tree in the northwest, a Yellow Bell-flower seedling stands today in the Vancouver Barracks, Washington. The tree is the only survivor of three planted from seeds brought from London, England, about 1825 by young employees of the Hudson Bay Company.

Forgotten and neglected, the tree was found in 1911 badly infested with San Jose scale, half of its branches dead and generally in a bad condition, by A. A. Quarnberg, horticultural inspector of the district. He received permission from Col. G. K. McGunnigle, at that time commander of the barracks, to prune, spray and take any other necessary steps to preserve the life of the tree as long as possible.

January 25, 1911, by direction of the Washington state commissioner of agriculture, Mr. Quarnberg took measurements and found the tree to have the following dimensions: One foot from the ground, diameter one and one-half feet; height, thirty-three feet; spread of crown, thirty-three feet.

# PROLONG

**TESTS SHOW:** (Left) Untreated burlap wrap almost completely rotted away after 10 weeks in shavings. (Right) PROLONG treated burlap wrap good as new after 25 weeks in shavings. (Note root growth through treated burlap.)

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LAST from  
8 to 24 months**

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yet permits the roots to grow through. *Easy to use . . . simply dip burlap in the proper solution and let it dry.*

**Retards ROTTING, MOLDING, MILDEW**

. . . of burlap, canvas, muslin, twine, rope, wood boxes, flats, stakes, laths and greenhouse benches. May be sprayed or brushed on. Every nurseryman and grower will find many time and money-saving uses for this amazing CHA-KEM-CO product. 1 gallon mixes with 8 gallons of diesel oil, distillate or petroleum naphtha.



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A thorough home-study course specializing in the design and layout of grounds plans and features selection and location. Training also includes plant propagation, surveying and grading operations, design of sprinkler systems, pruning, budding and grafting, transplanting operations, soil preparation, design of walks and drives, retaining walls, pools, design for border plantings, color harmony, etc.

**Project Included**

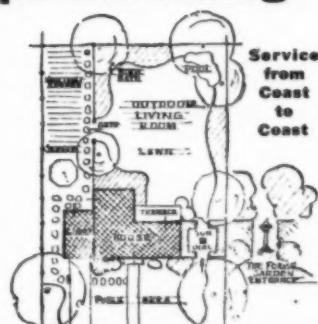
A design project covering problems on property of your choosing is incorporated in your course. This project is developed under the guidance of our Landscape Architects who follow it through to completion thus insuring coverage of your regional conditions.

**Employee Training**

Nurserymen from Maine to California are using this training to upgrade employees. It may be of help to your organization.

**Approved for Veterans**

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Light weight combined with strength—Pliable and easy forming.

Will not support mildew, fungus or moths. Mice or vermin will not eat through it.

In 200-yard rolls 24, 36 and 48 inches wide.

Sheets to your order.

Immediate delivery

Write for samples and prices

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*Packing Supplies for the Nurseryman*

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A limited quantity available for immediate shipment in 30/30/30 plain or creped waterproof in 200-yard rolls 18, 24, 36 and 48 inches wide.

### FUNGICIDES INCREASE PEACH SEED GERMINATION.

Nurserymen who grow peach seedlings for budding often have difficulty in securing a good stand in the nursery. This is largely due to decay and rotting of the seeds during stratification and when planted in the soil. Poor stand of peach seedlings in the nursery greatly reduces the number of budded stock per acre and means a loss, in man-hours, in budding and in culture. To combat this, treating the seeds with commercial fungicides has been found to improve the total germination and stand from thirty to fifty per cent. R. F. Carlson, now extension specialist in horticulture at the upper peninsula experiment station, Chatham, Mich., reported on such tests at the meeting this year of the American Society for Horticultural Science.

Preliminary experiments have in general proved successful, especially with certain preparations. The fungicides used in the tests were Fermate, Spergon, Arasan, Ceresan and Semesan. Fermate, Spergon and Arasan produced the best results for all varieties of peach seeds tested, whereas Ceresan and Semesan were harmful to some varieties and beneficial to others. The seeds of the Lovell and Kentucky Natural varieties showed best results when treated with Fermate and Spergon, whereas seeds of the Salwey variety showed increased germination when treated with Semesan.

The per cent germination was increased both when the whole pits and the naked seeds were treated. Ordinarily, the whole pits are stratified in the fall and planted in the spring, but for the sake of testing the possible injurious effects of some treatments, it was necessary to remove the stony pits and treat the naked seeds by dusting with the commercial preparation. In nearly all of the treatments, favorable results were obtained when the naked seeds were

### ARIENS A COMPLETELY PULVERIZED LEVEL SEED BED IN ONE OPERATION TILLER

Here is the perfect all-purpose tilling and cultivating combine for the nurseryman. ARIENS-TILLER harrows as it discs as it plows. ONE operation produces a properly prepared seed bed, thoroughly aerated with pulverized soil, shredded and evenly mixed. No large soil chunks to retard plant growth. ARIENS-TILLER can be operated in wet or dry seasons and handles easily in small spaces. Complete details and name of distributor on request.



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319½ Georgia St., Louisiana, Mo.

Loss and damage claims against railroad and express companies collected.

Freight bills audited.

Past due notes and accounts collected.

Well known to the nurserymen of the country.

Reference: Bank of Louisiana.

### LINDIG'S SOIL SHREDDER

*New improved model*

Engineered for the perfection of soils.



Prompt delivery.

Write for folder and price list.

**Lindig's Mfg. Co.**  
1875 W. Carpenter Ave.  
St. Paul 8, Minn.

*Special equipment built to your specifications.*

treated both before and after stratification.

Since nurserymen generally stratify the whole pits, and in the spring crack only pits that have failed to split, the whole pits should be treated before stratification in the fall to obtain best results. In preliminary experiments, which gave favorable results, the pits were soaked in tap water alone and in water solutions of Fermate for twenty hours. The con-

centration rates used were one, two and three pounds of fungicide per hundred gallons of water. The subsequent germination and stand in seed flats of the treated lots were twenty per cent higher than the pits which were soaked in water only. The three per cent concentration of Fermate gave the best results. Twenty hours of soaking is perhaps the shortest limit for good results, since the pits do not take up water fast. It

would seem advisable to soak the pits at least three to four days or even longer.

In laboratory experiments, the seeds were planted in soil flats and grown in the greenhouse, which provided for approximate field conditions of growing the plants. Actual field trials are now under way in which only the whole pits were used and treated as previously described. More experimental field results are needed before really definite statements regarding the value of fungicidal treatment to the commercial grower and nurseryman can be made, but in the light of initial experiments one can say that the outlook for increased stand and germination is favorable.

#### SELLING PLANTINGS.

[Continued from page 13]

job. A Ford-Ferguson seems indispensable, along with its numerous attachments, such as plows, disks, cultivators, earth borers, bulldozers, land levers, carryalls and tractor loaders. Other equipment might include several different sizes of Rototillers, fertilizer and seed spreaders, lawn rollers and hand and power mowers. Dump trucks, in conjunction with tractor loaders, are needed for removing and replacing topsoil, and, of course, general trucks for taking the men to and from the jobs as well as for hauling plant materials and removing debris. Well arranged sales grounds, good tools and equipment and well-trained personnel will give your client confidence in your firm's ability.

#### Methods of Selling.

The preliminary steps have now been taken. How you handle the client from now on will show in your profit-and-loss columns. By submitting your plan, you already have made a financial investment in the prospective client.

There are several reasons why the client can appreciate the practicability of having a landscape plan made. Whether he wants a complete planting immediately or prefers to stretch the work over a period of several months, when the job is completed, the area will be properly planted. The client will have an opportunity to look over the plan and may get a perspective he did not have before. A change in the shape of the lawn area, the walk, the driveway, the patio, or something similar may not seem important to him until he is shown it on the plan. By considering such things in your plan, you will impress the client with your per-

## AUTOMOTIVE TREE MOVERS



The above is a picture of one of our 7-foot Rocker Type Tree Movers, owned and operated by the Laur Shade Tree Service, St. Louis, Mo. The tree is a large sugar maple weighing slightly more than five tons. This is the third mover purchased from us by this company.

On short hauls it is possible to move five or six big trees within a day's time. We can use this mover as a crane to load trailers or other trucks for longer hauls.

Place your order early to make sure of Fall delivery due to a scarcity of materials. Write for further information.

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Genera of hardy bamboos of which representative species are now in cultivation in the United States are arundinaria, sasa, shibataea, pseudosasa, semiarundinaria and phyllostachys. A number of species of these hardy bamboos are illustrated and discussed in detail in the 42-page bulletin.

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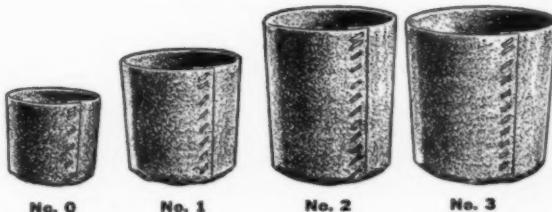
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